MOTIFSIM - MOTIF SIMilarity Detection Tool

Version 2.1

INPUT

Input Parameters

Number of files:	2
Number of top significant motifs:	10
Number of best matches:	10
Similarity cutoff >=	0.75
Matching motif database:	UniProbe Mus Musculus
Phylogenetic tree:	Yes
Combined similar motifs:	Yes
Output file type:	All
Output file format:	All

Input files and motif counts

File name	Count of motifs	Dataset number
W-ChIPMotifs_DM230.txt	11	1
RSAT_peak-motifs_DM230.txt	10	2

RESULTS

Best Matches in Database for Each Motif (Highest to Lowest)

Dataset #: 1   **Motif ID: 1**   **Motif name: TFW1**

Original motif

Consensus sequence: GTCGCG

Reverse complement motif

Consensus sequence: CGCGAC

Best Matches for Motif ID 1 (Highest to Lowest)

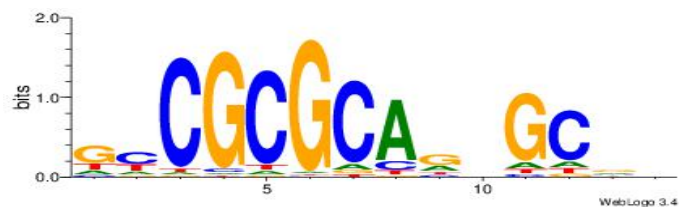|	
Motif ID:	UP00065
Motif name:	Zfp161_secondary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Original Motif
Direction:	Backward
Position number:	9
Number of overlap:	6
Similarity score:	0

Alignment:
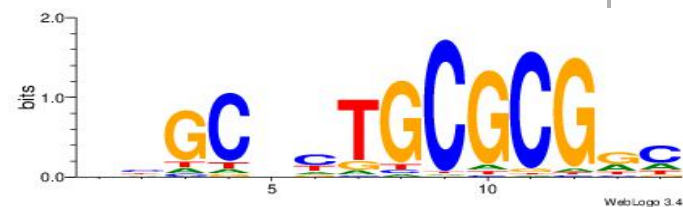
```
GYCGCGCARBGCVB
GTCGCG--------
```

Original motif

Consensus sequence: GYCGCGCARBGCVB

Reverse complement motif

Consensus sequence: VVGCVMTGCGCGKC

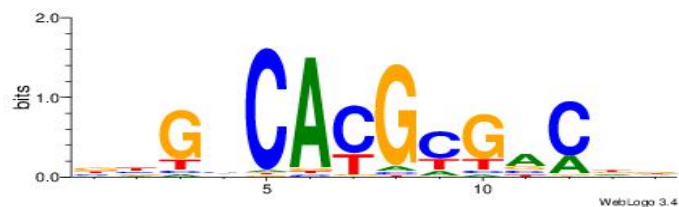|	
Motif ID:	UP00060
Motif name:	Max_secondary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Original Motif
Direction:	Backward
Position number:	3
Number of overlap:	6
Similarity score:	0.00875457

Alignment:
```
BBGHCACGCGACDD
------CGCGAC--
```

Original motif
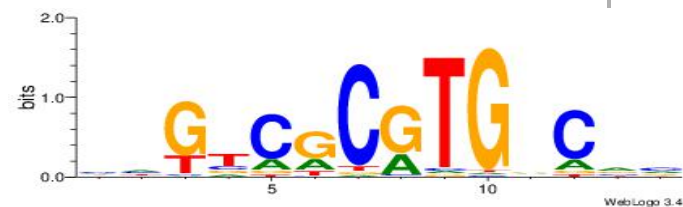
Consensus sequence: BBGHCACGCGACDD

Reverse complement motif

Consensus sequence: HDGTCGCGTGDCVB

Motif ID: UP00003
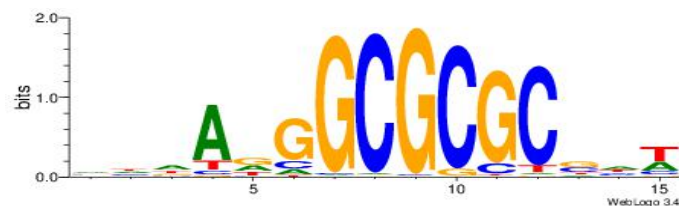
Motif name: E2F3_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 6

Number of overlap: 6

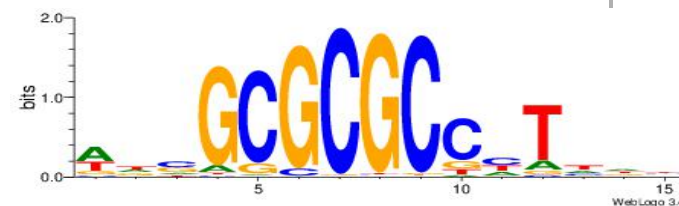Similarity score: 0.0102952

Alignment:
```
WHSGCGCGCCHTDHB
----CGCGAC-----
```

Original motif   Reverse complement motif

Consensus sequence: VHDADGGCGCGCSHW   Consensus sequence: WHSGCGCGCCHTDHB

Motif ID: UP00526

Motif name: Foxn1_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif
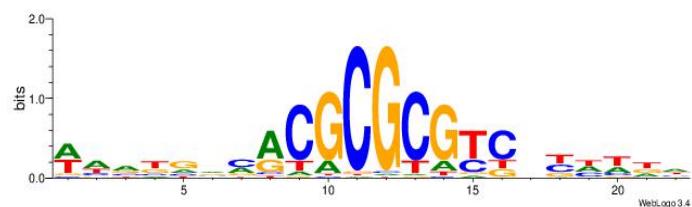
Direction: Backward

Position number: 7

Number of overlap: 6

Similarity score: 0.0119605
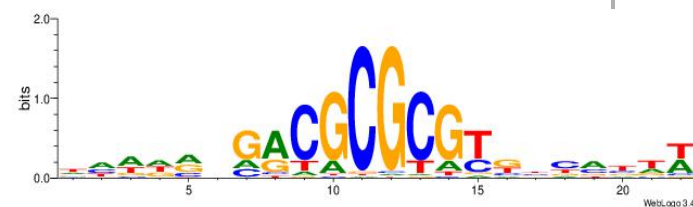
Alignment:

```
WHVBVVMACGCGCGTCDYHWDH
----------CGCGAC------
```

Original motif

Consensus sequence: WHVBVVMACGCGCGTCDYHWDH

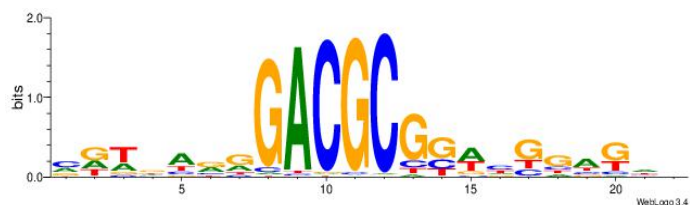Reverse complement motif

Consensus sequence: HDWHMHGACGCGCGTRBVVBHW

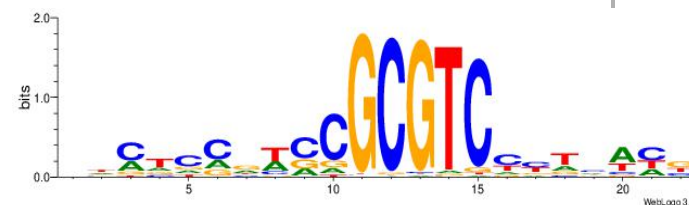|	
Motif ID:	UP00527
Motif name:	Foxn4_secondary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Original Motif
Direction:	Forward
Position number:	8
Number of overlap:	6
Similarity score:	0.014366

Alignment:

```
VDWDARRGACGCGGWHGGAKHV
-------GTCGCG---------
```

Original motif

Consensus sequence: VDWDARRGACGCGGWHGGAKHV

Reverse complement motif

Consensus sequence: VHYTCCDWCCGCGTCMMTHWHV

Motif ID:	UP00065
Motif name:	Zfp161_primary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	10
Number of overlap:	6
Similarity score:	0.0143989

Alignment:

```
DMMDGMGCGCGCGCHD
---------CGCGAC-
```

Original motif

Consensus sequence: DDGCGCGCGCRCHYRD

Reverse complement motif

Consensus sequence: DMMDGMGCGCGCGCHD

Motif ID: UP00001

Motif name: E2F2_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 5
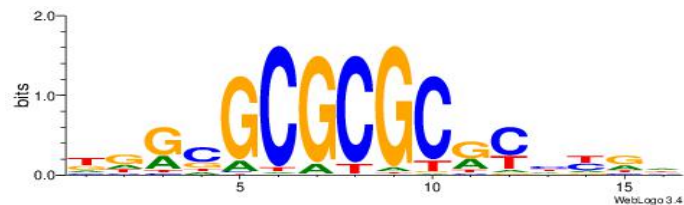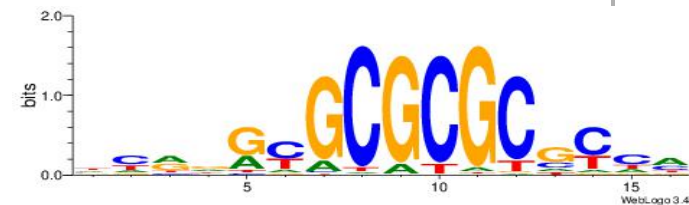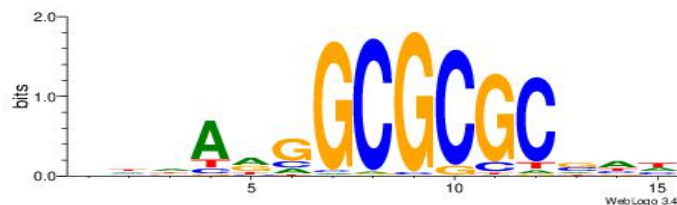
Number of overlap: 6

Similarity score: 0.0147239
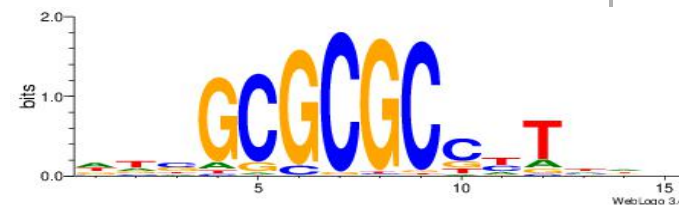
Alignment:

```
HHVGCGCGCCKTDHB
----CGCGAC-----
```

Original motif

Consensus sequence: VHDARGGCGCGCVHH

Reverse complement motif

Consensus sequence: HHVGCGCGCCKTDHB

Motif ID: UP00002

Motif name: Sp4_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement
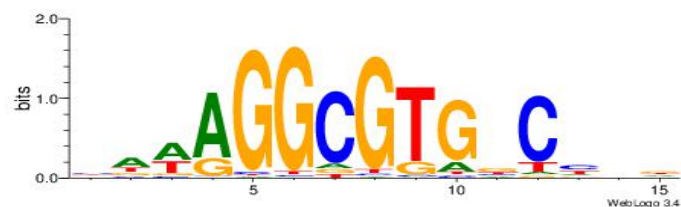
Direction: Backward

Position number: 7

Number of overlap: 6

Similarity score: 0.0222574

Alignment:

```
HHDGBCACGCCTWDB
---GTCGCG------
```
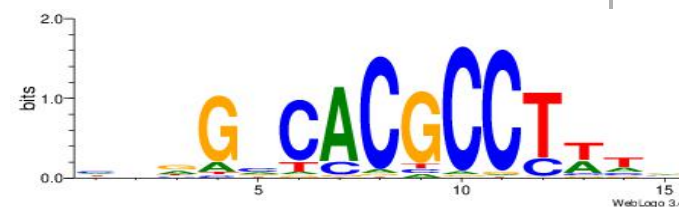
Original motif

Consensus sequence: BDWAGGCGTGBCHHD

Reverse complement motif

Consensus sequence: HHDGBCACGCCTWDB

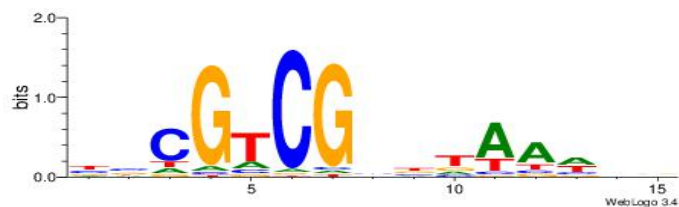Motif ID: UP00049

Motif name: Sp100_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 7

Number of overlap: 6

Similarity score: 0.0300795
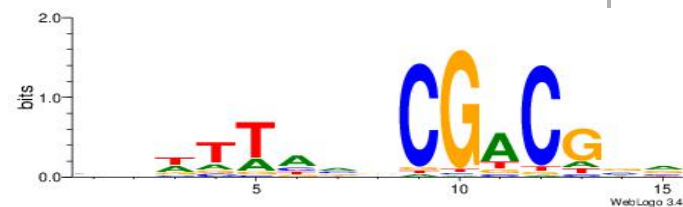
Alignment:

```
BBCGTCGHBTAAWDB
---GTCGCG------
```

Original motif

Consensus sequence: BBCGTCGHBTAAWDB

Reverse complement motif

Consensus sequence: BDWTTAVDCGACGBV

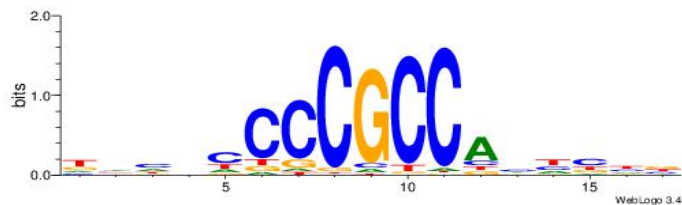|	
Motif ID:	UP00000
Motif name:	Smad3_secondary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	5
Number of overlap:	6
Similarity score:	0.0317992

Alignment:

```
BHBHDTGGCGGGGBDHD
----GTCGCG-------
```
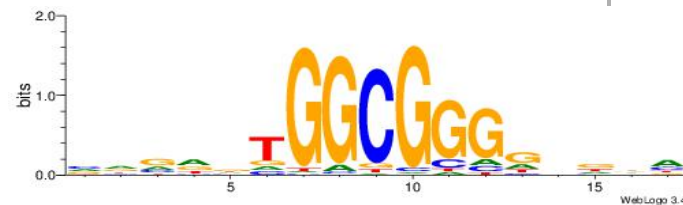
Original motif

Consensus sequence: DHHBCCCCGCCAHHBHB

Reverse complement motif

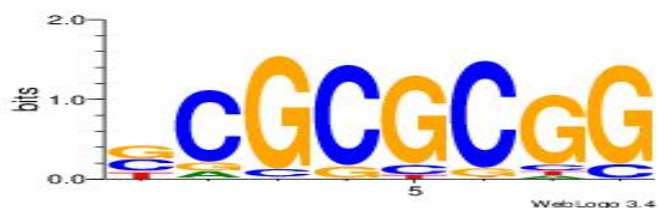Consensus sequence: BHBHDTGGCGGGGBDHD

Dataset #: 1   Motif ID: 2   Motif name: TFW2

Original motif

Consensus sequence: SCGCGCGG

Reverse complement motif

Consensus sequence: CCGCGCGS

Best Matches for Motif ID 2 (Highest to Lowest)

Motif ID:	UP00526
Motif name:	Foxn1_primary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	8
Number of overlap:	8
Similarity score:	0

Alignment:

```
HDWHMHGACGCGCGTRBVVBHW
-------CCGCGCGS-------
```

Original motif

Consensus sequence: WHVBVVMACGCGCGTCDYHWDH

Reverse complement motif

Consensus sequence: HDWHMHGACGCGCGTRBVVBHW

Motif ID: UP00065

Motif name: Zfp161_secondary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 2
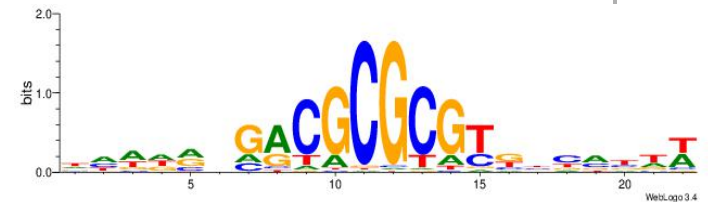
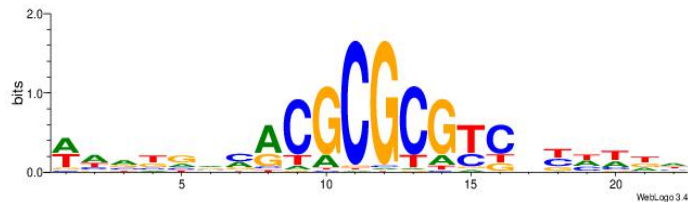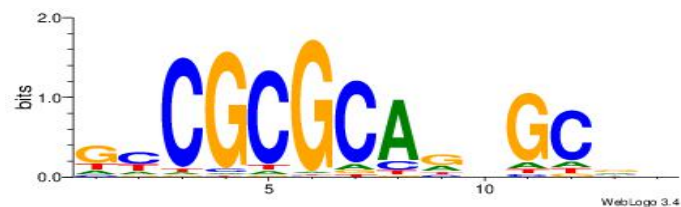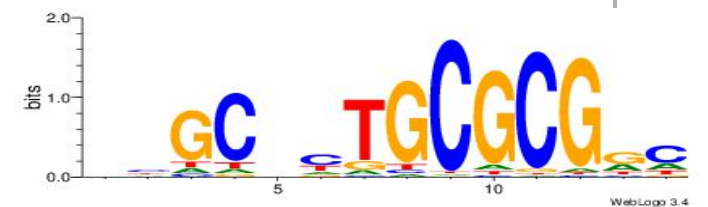Number of overlap: 8

Similarity score: 0.00228411

Alignment:

```
VVGCVMTGCGCGKC
-----CCGCGCGS-
```

Original motif   Reverse complement motif

Consensus sequence: GYCGCGCARBGCVB   Consensus sequence: VVGCVMTGCGCGKC

Motif ID: UP00003
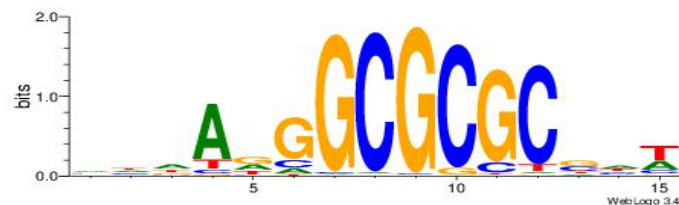
Motif name: E2F3_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 7

Number of overlap: 8

Similarity score: 0.00337853

Alignment:
```
WHSGCGCGCCHTDHB
-CCGCGCGS------
```
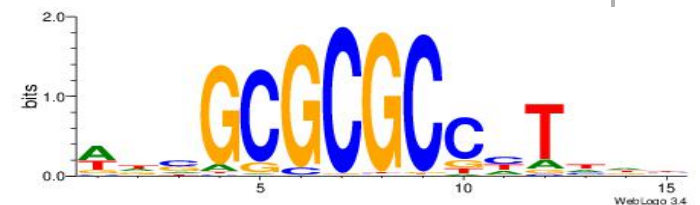
Original motif

Consensus sequence: VHDADGGCGCGCSHW

Reverse complement motif

Consensus sequence: WHSGCGCGCCHTDHB

Motif ID: UP00001

Motif name: E2F2_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 2

Number of overlap: 8
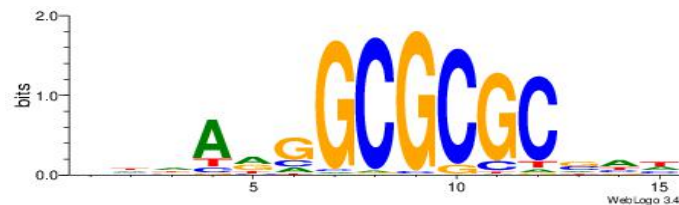
Similarity score: 0.00399923
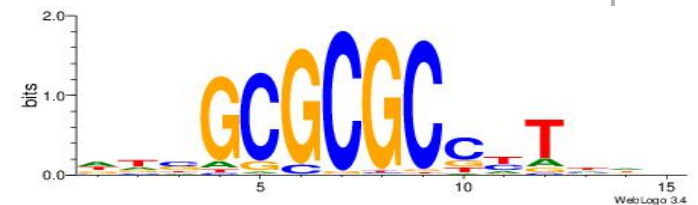
Alignment:
HHVGCGCGCCKTDHB
-CCGCGCGS------

Original motif   Reverse complement motif
Consensus sequence: VHDARGGCGCGCVHH   Consensus sequence: HHVGCGCGCCKTDHB

Motif ID: UP00065
Motif name: Zfp161_primary
Species: Mus musculus
Matching format of first motif: Reverse Complement
Matching format of second motif: Original Motif
Direction: Backward
Position number: 5
Number of overlap: 8
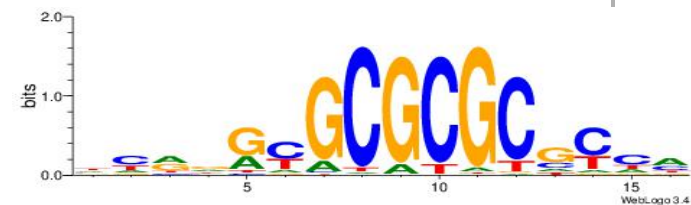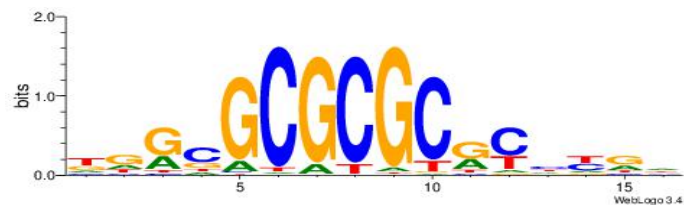Similarity score: 0.00484534

Alignment:
DDGCGCGCGCRCHYRD
----CCGCGCGS----

Original motif   Reverse complement motif
Consensus sequence: DDGCGCGCGCRCHYRD   Consensus sequence: DMMDGMGCGCGCGCHD

Motif ID: [UP00526](UP00526)
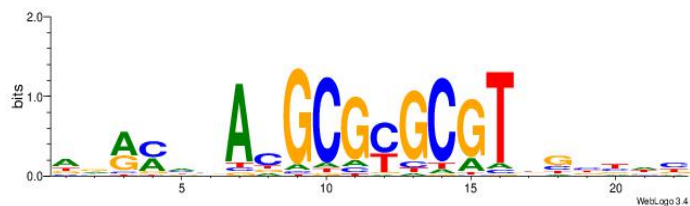
Motif name: Foxn1_secondary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 7

Number of overlap: 8

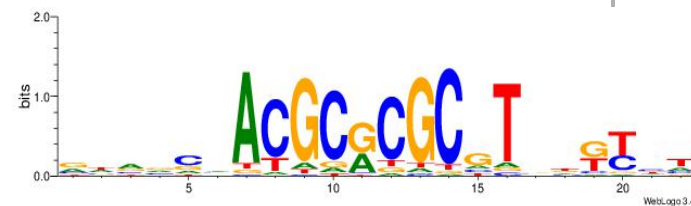Similarity score: 0.0149577

Alignment:

```
BDVBCDACGCKCGCGTBHRKHD
------CCGCGCGS--------
```

Original motif   Reverse complement motif

Consensus sequence: DDRMHBACGCGYGCGTDGBBDB   Consensus sequence: BDVBCDACGCKCGCGTBHRKHD

Motif ID: UP00400

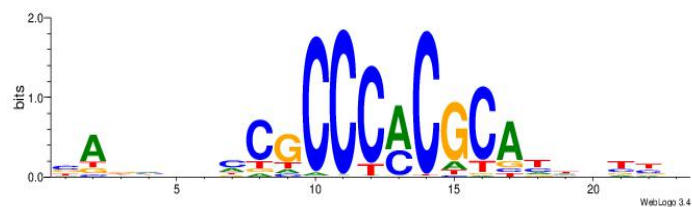Motif name: Zif268

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 6

Number of overlap: 8
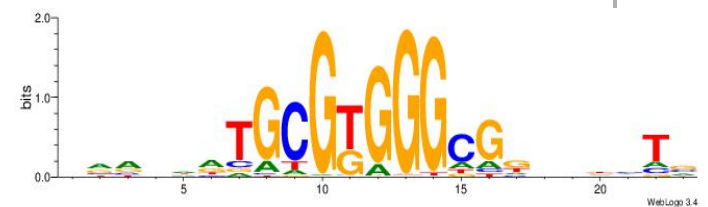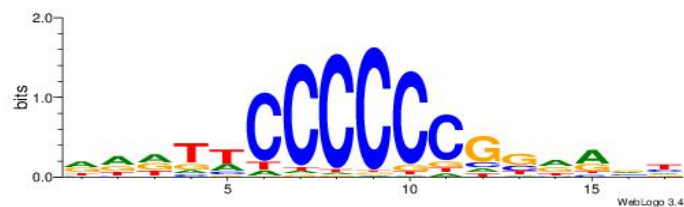
Similarity score: 0.0194485

Alignment:

VVVDHHTGCGYGGGCGDHVHHTB

-----SCGCGCGG----------

Original motif   Reverse complement motif

Consensus sequence: BADHBDHCGCCCMCGCAHHDBBV   Consensus sequence: VVVDHHTGCGYGGGCGDHVHHTB

Motif ID: UP00022

Motif name: Zfp740_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 6

Number of overlap: 8
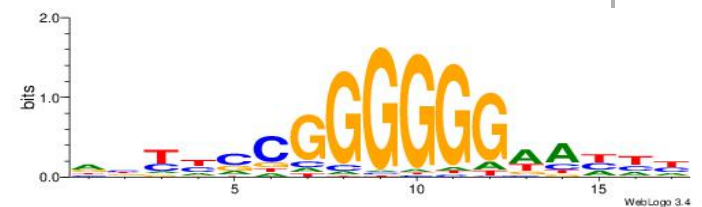
Similarity score: 0.0230299

Alignment:

```
HVKDCCGGGGGGWADDD
----SCGCGCGG-----
```


Original motif   Reverse complement motif

Consensus sequence: DDDTWCCCCCCGGDRVH   Consensus sequence: HVKDCCGGGGGGWADDD

Motif ID: UP00007

Motif name: Egr1_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Forward

Position number: 6

Number of overlap: 8
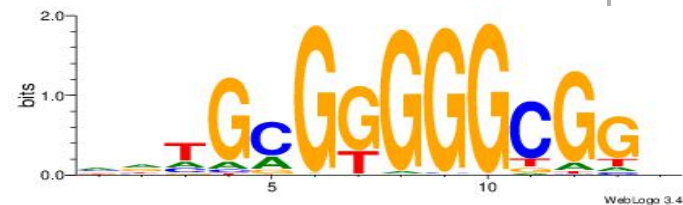
Similarity score: 0.0247841

Alignment:

```
HCCGCCCCCGCAHB
-----CCGCGCGS-
```


Original motif   Reverse complement motif

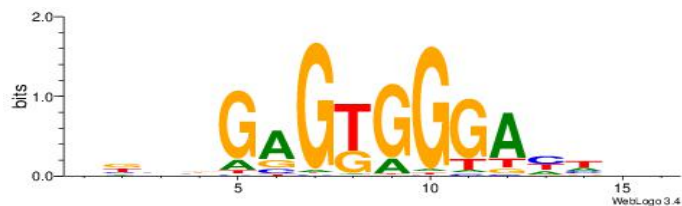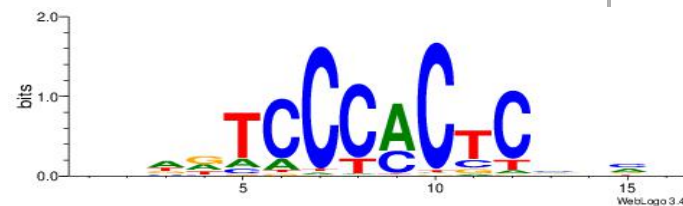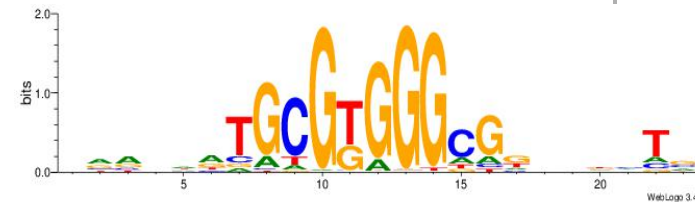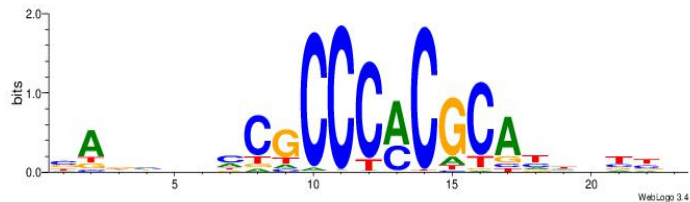Consensus sequence: HCCGCCCCCGCAHB
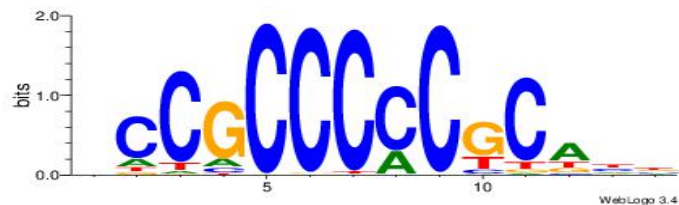
Consensus sequence: VHTGCGGGGGCGGH

Motif ID:	UP00007
Motif name:	Egr1_secondary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	7
Number of overlap:	8
Similarity score:	0.0249557

Alignment:
```
BHHDTCCCACTCBDBV
------CCGCGCGS--
```

Original motif
Consensus sequence: BBHBGAGTGGGAHHDB

Reverse complement motif
Consensus sequence: BHHDTCCCACTCBDBV

Dataset #: 1   Motif ID: 3   Motif name: TFW3

Original motif

Consensus sequence: CGGCYBCGCG

Reverse complement motif

Consensus sequence: CGCGBMGCCG

Best Matches for Motif ID 3 (Highest to Lowest)

Motif ID:	UP00400
Motif name:	Zif268
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	7
Number of overlap:	10
Similarity score:	0.0331859

Alignment:

```
VVVDHHTGCGYGGGCGDHVHHTB
------CGCGBMGCCG-------
```

Original motif

Consensus sequence: BADHBDHCGCCCMCGCAHHDBBV

Reverse complement motif

Consensus sequence: VVVDHHTGCGYGGGCGDHVHHTB

Motif ID: UP00007

Motif name: Egr1_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 3

Number of overlap: 10
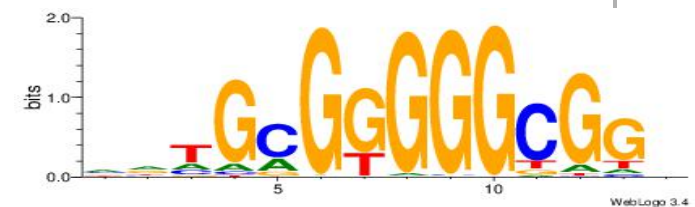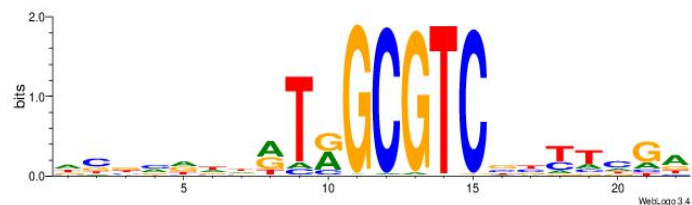
Similarity score: 0.0342114

Alignment:

```
HCCGCCCCCGCAHB
--CGGCYBCGCG--
```

Original motif   Reverse complement motif
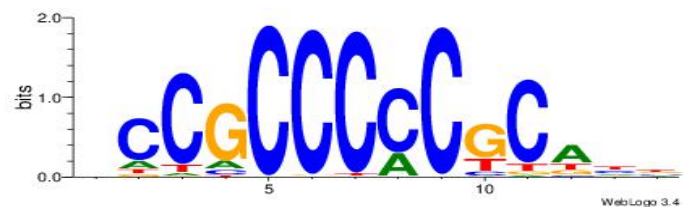
Consensus sequence: HCCGCCCCCGCAHB   Consensus sequence: VHTGCGGGGGCGGH

Motif ID: UP00527

Motif name: Foxn4_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Forward

Position number: 12

Number of overlap: 10

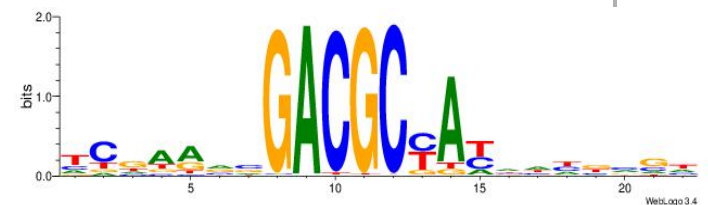Similarity score: 0.0356548

Alignment:

DBBVDDDRTRGCGTCBBYTHGA

-----------CGGCYBCGCG-

Original motif   Reverse complement motif

Consensus sequence: DBBVDDDRTRGCGTCBBYTHGA   Consensus sequence: TCDAMVBGACGCMAKDDDVBBD

Motif ID: UP00526
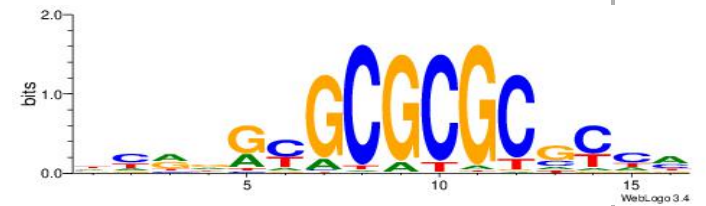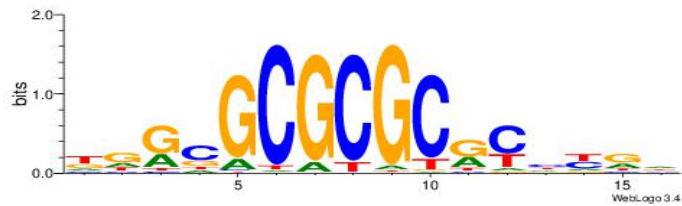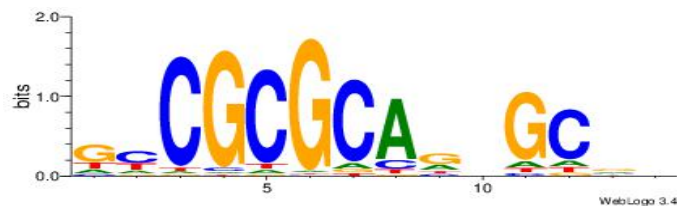
Motif name: Foxn1_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 11

Number of overlap: 10
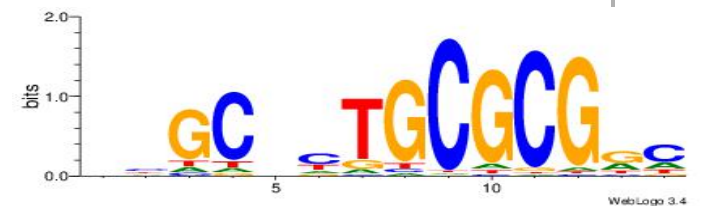
Similarity score: 0.041792

Alignment:
HDWHMHGACGCGCGTRBVVBHW
----------CGCGBMGCCG--

Original motif   Reverse complement motif
Consensus sequence: WHVBVVMACGCGCGTCDYHWDH   Consensus sequence: HDWHMHGACGCGCGTRBVVBHW
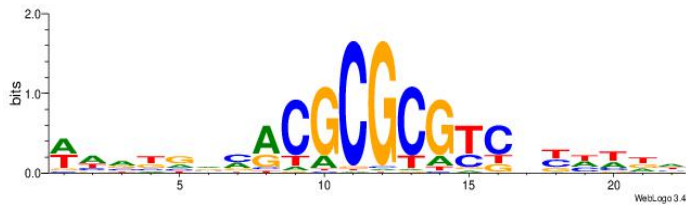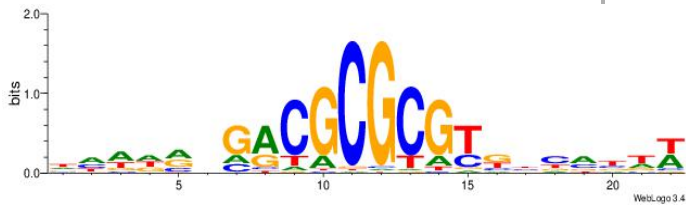
Motif ID: UP00065
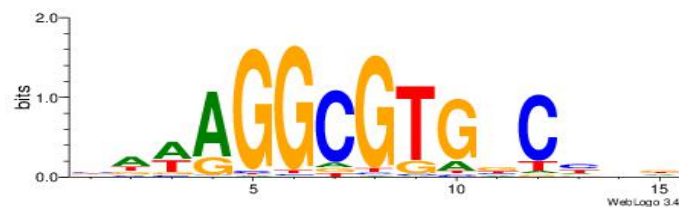
Motif name: Zfp161_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Backward

Position number: 2

Number of overlap: 10

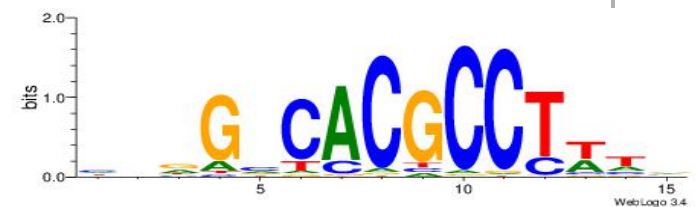Similarity score: 0.041904

Alignment:
DDGCGCGCGCRCHYRD
-----CGCGBMGCCG-

Original motif   Reverse complement motif
Consensus sequence: DDGCGCGCGCRCHYRD   Consensus sequence: DMMDGMGCGCGCGCHD

Motif ID: UP00065

Motif name: Zfp161_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Backward
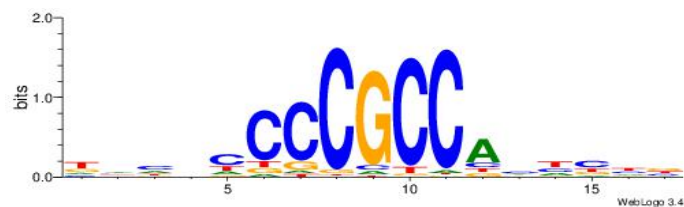
Position number: 5

Number of overlap: 10

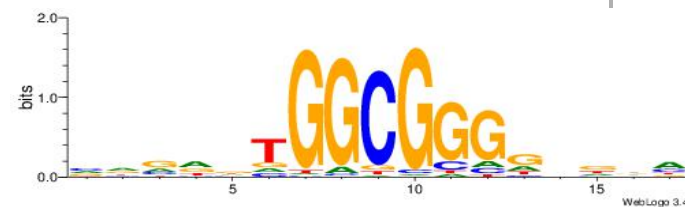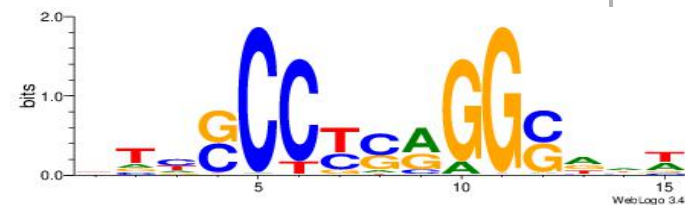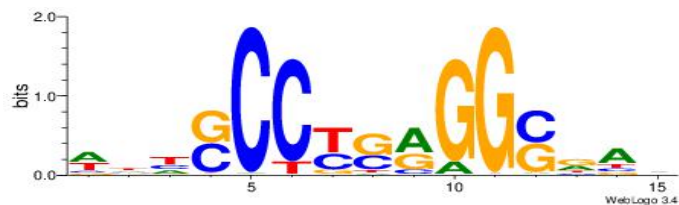Similarity score: 0.0419429

Alignment:
```
VVGCVMTGCGCGKC
CGGCYBCGCG----
```

Original motif
Consensus sequence: GYCGCGCARBGCVB

Reverse complement motif
Consensus sequence: VVGCVMTGCGCGKC

Motif ID: UP00002

Motif name: Sp4_secondary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Backward

Position number: 2

Number of overlap: 10

Similarity score: 0.0475178

Alignment:

BDWAGGCGTGBCHHD

----CGCGBMGCCG-

Original motif   Reverse complement motif

Consensus sequence: BDWAGGCGTGBCHHD   Consensus sequence: HHDGBCACGCCTWDB

Motif ID: UP00000

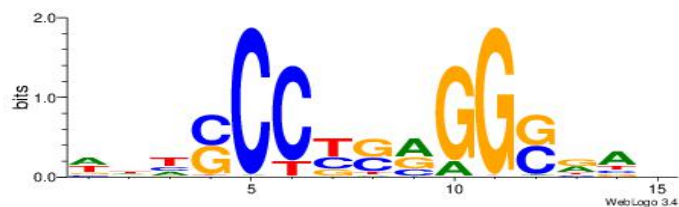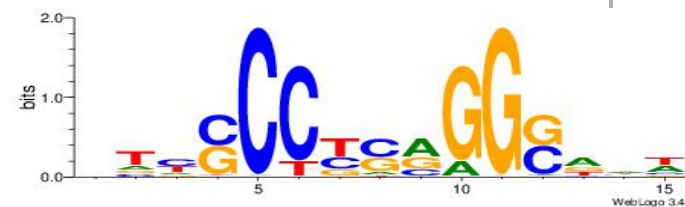Motif name: Smad3_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 1

Number of overlap: 10

Similarity score: 0.0490044

Alignment:
```
DHHBCCCGCCAHHBHB
-------CGGCYBCGCG
```
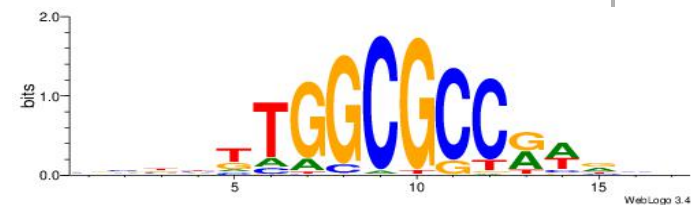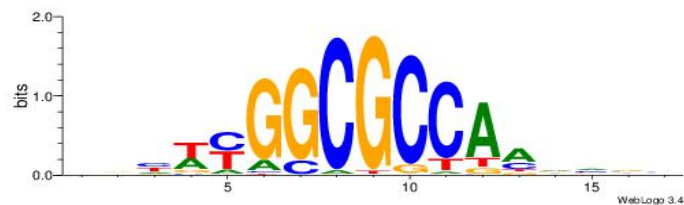
Original motif

Consensus sequence: DHHBCCCGCCAHHBHB

Reverse complement motif

Consensus sequence: BHBHDTGGCGGGGBDHD

Motif ID: [UP00087](UP00087)

Motif name: Tcfap2c_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 3

Number of overlap: 10

Similarity score: 0.0499902

Alignment:
```
DTHSCCKSMGGSHHW
--CGGCYBCGCG---
```

Original motif

Consensus sequence: WHHSCCYSRGGSDAD

Reverse complement motif

Consensus sequence: DTHSCCKSMGGSHHW

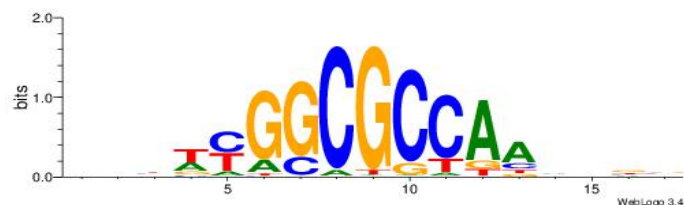Motif ID: UP00005

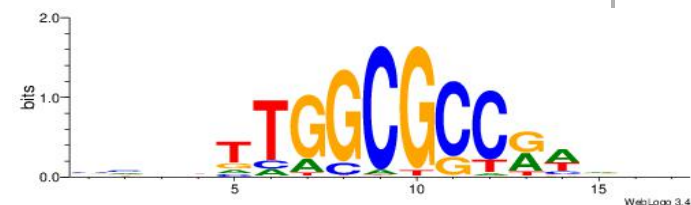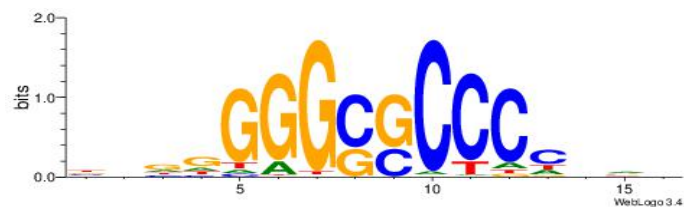Motif name: Tcfap2a_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 4

Number of overlap: 10

Similarity score: 0.0500462

Alignment:

```
DTMSCCKSMGGSHDW
--CGGCYBCGCG---
```

Original motif   Reverse complement motif

Consensus sequence: WDHSCCYSRGGSRAD   Consensus sequence: DTMSCCKSMGGSHDW

Dataset #: 1   Motif ID: 4   Motif name: TFF1

Original motif

Consensus sequence: CGGVGCCGCVGC
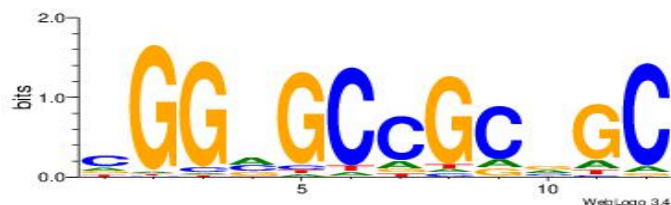
Reverse complement motif

Consensus sequence: GCVGCGGCBCCG
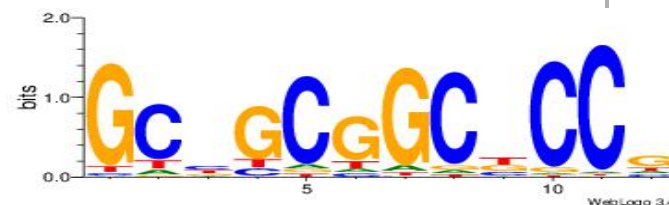
Best Matches for Motif ID 4 (Highest to Lowest)

Motif ID:	UP00003
Motif name:	E2F3_secondary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Original Motif
Direction:	Forward
Position number:	5
Number of overlap:	12
Similarity score:	0.0423593

Alignment:

```
HBHWYGGCGCCAMDVBB
----CGGVGCCGCVGC-
```

Original motif

Consensus sequence: HBHWYGGCGCCAMDVBB

Reverse complement motif

Consensus sequence: BBBDYTGGCGCCKWDBD

Motif ID:	UP00001
Motif name:	E2F2_secondary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Original Motif
Direction:	Forward
Position number:	5
Number of overlap:	12
Similarity score:	0.046515

Alignment:

```
HVBWYGGCGCCAADVBB
----CGGVGCCGCVGC-
```

Original motif
Consensus sequence: HVBWYGGCGCCAADVBB

Reverse complement motif
Consensus sequence: BBBDTTGGCGCCKWVVD

Motif ID: UP00088

Motif name: Plagl1_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Forward

Position number: 1

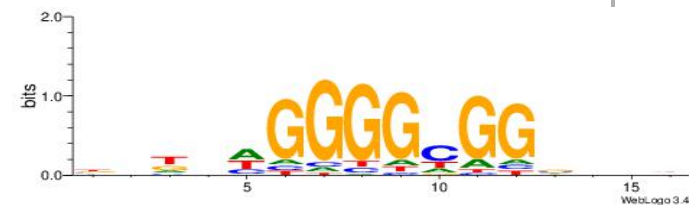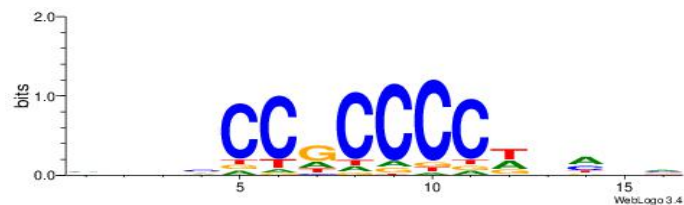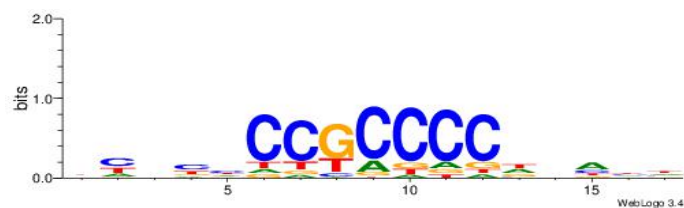Number of overlap: 12

Similarity score: 0.0472704

Alignment:

VBVGGGGSSCCCCHHV
GCVGCGGCBCCG----

Original motif

Consensus sequence: BHDGGGGSSCCCCBVV

Reverse complement motif

Consensus sequence: VBVGGGGSSCCCCHHV
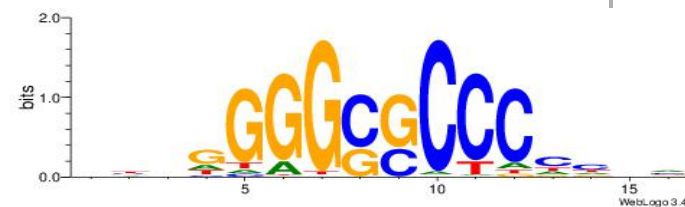
Motif ID: UP00099

Motif name: Ascl2_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Forward

Position number: 5

Number of overlap: 12

Similarity score: 0.0476914

Alignment:
BBYVVCAGCTGCBVHHD
----GCVGCGGCBCCG-

Original motif

Consensus sequence: BBYVVCAGCTGCBVHHD
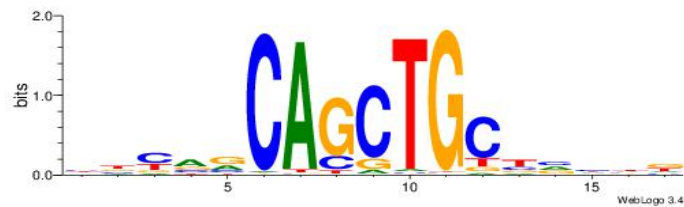
Reverse complement motif

Consensus sequence: HHDVVGCAGCTGVBKVB
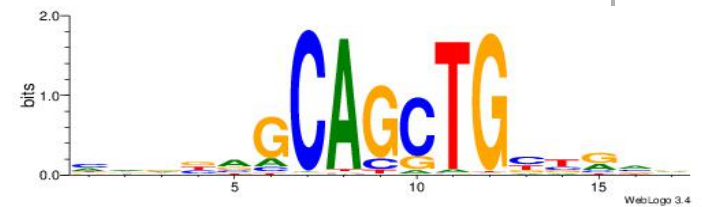
Motif ID:	UP00043
Motif name:	Bcl6b_secondary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Original Motif
Direction:	Backward
Position number:	5
Number of overlap:	12
Similarity score:	0.0508178

Alignment:
HBBBCCGCCCCWHHHV
GCVGCGGCBCCG----

Original motif

Consensus sequence: HBBBCCGCCCCWHHHV

Reverse complement motif
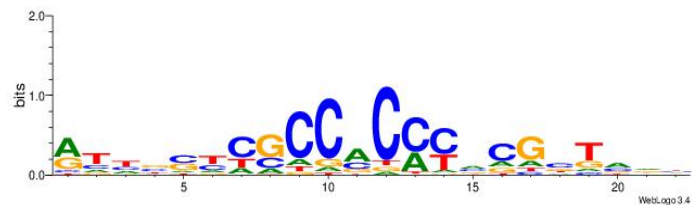
Consensus sequence: BHHHWGGGGCGGBBVH

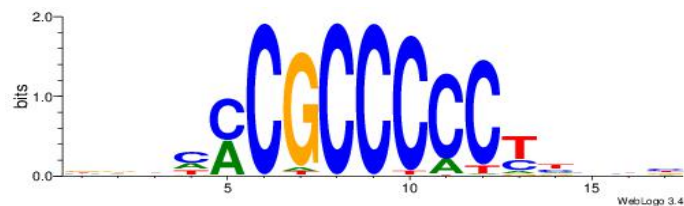| Motif ID:	UP00033
Motif name:	Zfp410_secondary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Original Motif
Direction:	Backward
Position number:	5
Number of overlap:	12
Similarity score:	0.0533422

Alignment:

```
BHHBHCCGCCCCDHHHH
-GCVGCGGCBCCG----
```
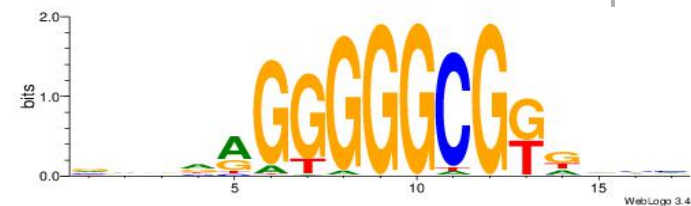
Original motif
Consensus sequence: BHHBHCCGCCCCDHHHH

Reverse complement motif
Consensus sequence: HHHHDGGGGCGGDBHDV
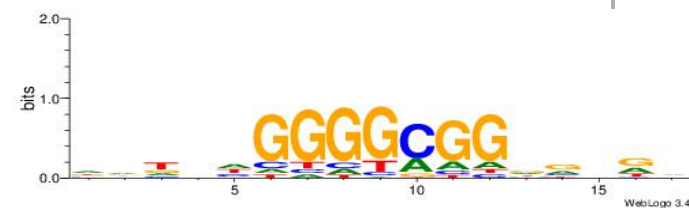
Motif ID: UP00539

Motif name: Gli2_v016060_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 9

Number of overlap: 12

Similarity score: 0.0561199

Alignment:

```
HDBABCGBKRGYGGCGMSBHAK
--------CGGVGCCGCVGC--
```

Original motif

Consensus sequence: RTHBSYCGCCMCMYVCGBTVDH

Reverse complement motif

Consensus sequence: HDBABCGBKRGYGGCGMSBHAK
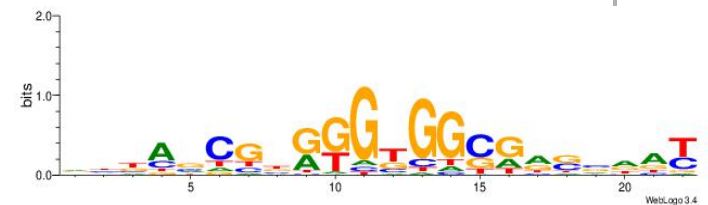
Motif ID: UP00002

Motif name: Sp4_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Forward

Position number: 2

Number of overlap: 12

Similarity score: 0.0577556

Alignment:

```
BDHHMCGCCCCCTHVBB
-GCVGCGGCBCCG----
```

Original motif

Consensus sequence: BDHHMCGCCCCCTHVBB

Reverse complement motif

Consensus sequence: BVVHAGGGGGCGRDHHB

Motif ID:	UP00000
Motif name:	Smad3_secondary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Original Motif
Direction:	Backward
Position number:	6
Number of overlap:	12
Similarity score:	0.0577695

Alignment:

```
DHHBCCCGCCAHHBHB
GCVGCGGCBCCG-----
```

Original motif

Consensus sequence: DHHBCCCGCCAHHBHB

Reverse complement motif

Consensus sequence: BHBHDTGGCGGGGBDHD
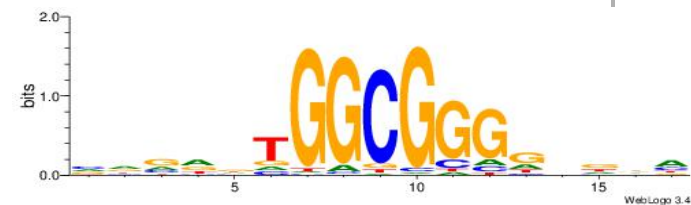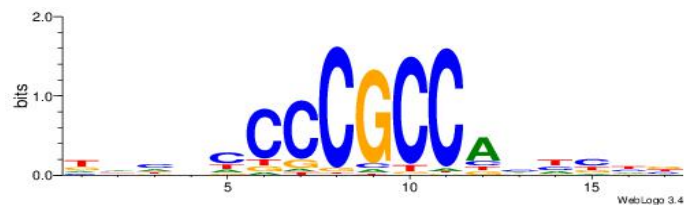
Motif ID: [UP00540](UP00540)

Motif name: Gli3_v015681_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 3

Number of overlap: 12

Similarity score: 0.0581164

Alignment:

```
DVTTVVCVYGGHGGYCHHDMYB
--------CGGVGCCGCVGC--
```
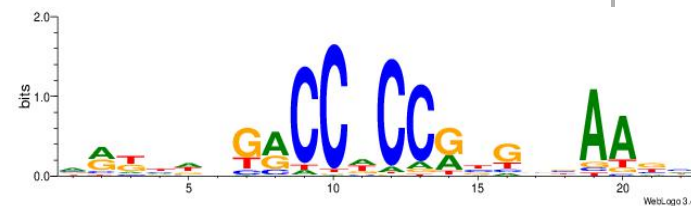
Original motif

Consensus sequence: DVTTVVCVYGGHGGYCHHDMYB
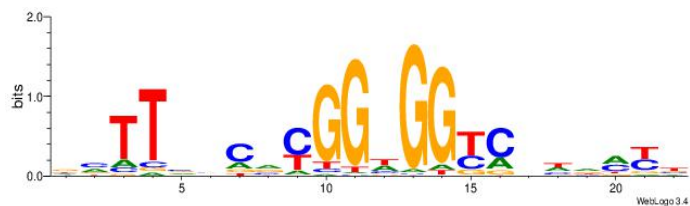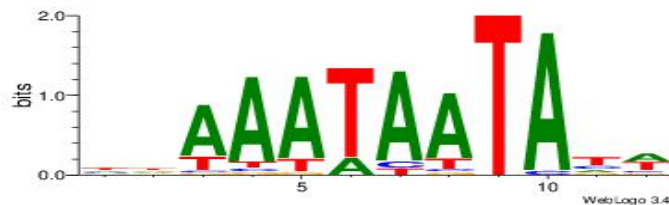

Reverse complement motif

Consensus sequence: VMYDHDGMCCHCCKBGVVAAVH

Dataset #: 2   Motif ID: 13   Motif name: tkAAATAATAtw

Original motif

Consensus sequence: HDAAATAATAHW

Reverse complement motif

Consensus sequence: WHTATTATTTDH
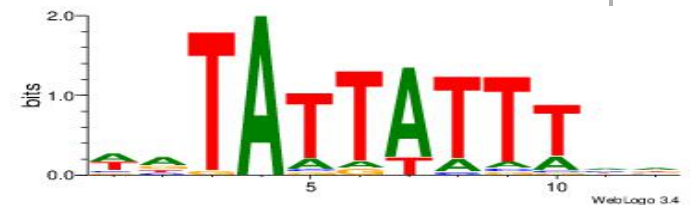
Best Matches for Motif ID 13 (Highest to Lowest)

Motif ID:	UP00121
Motif name:	Hoxd10
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	3
Number of overlap:	12
Similarity score:	0.00353196

Alignment:

```
HDDDATTTTATTKVRDB
---WHTATTATTTDH--
```
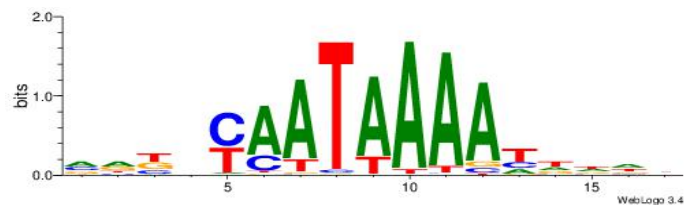
Original motif

Consensus sequence: VDKVYAATAAAATDDDH

Reverse complement motif

Consensus sequence: HDDDATTTTATTKVRDB
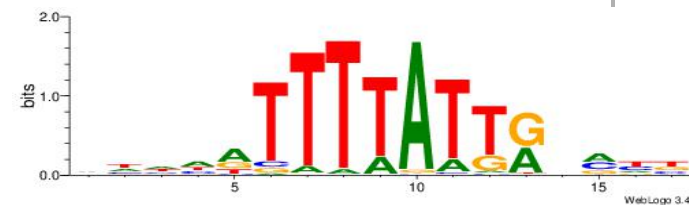
Motif ID: UP00244
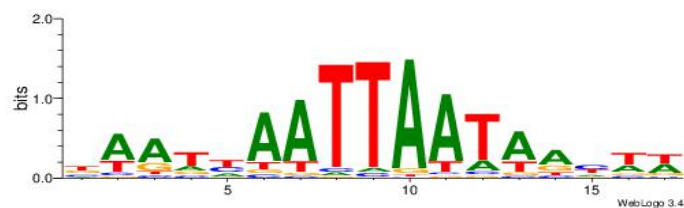
Motif name: Tlx2

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Forward

Position number: 4

Number of overlap: 12

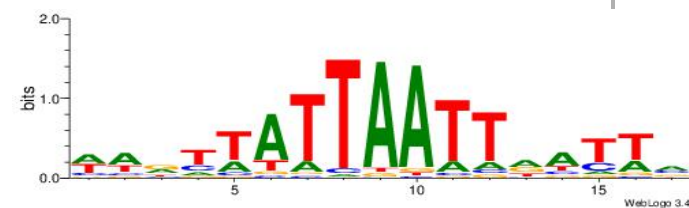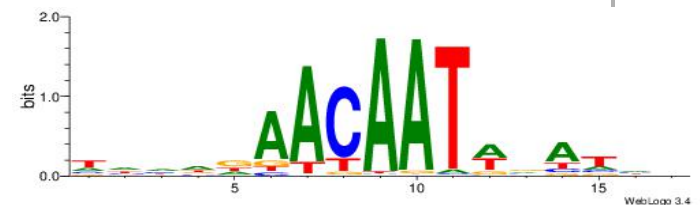Similarity score: 0.00646023

Alignment:

BAATHAATTAATAAHWW

---HDAAATAATAHW--

Original motif   Reverse complement motif

Consensus sequence: BAATHAATTAATAAHWW   Consensus sequence: WWDTTATTAATTHATTV

Motif ID: UP00051

Motif name:	Sox8_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	4
Number of overlap:	12
Similarity score:	0.0120674

Alignment:

```
DDDHDAACAATWBATDD
--HDAAATAATAHW---
```

Original motif

Consensus sequence: DDATBWATTGTTHHDDD
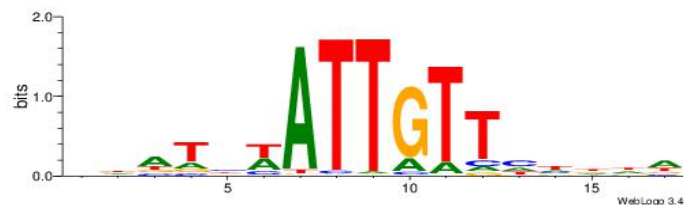
Reverse complement motif

Consensus sequence: DDDHDAACAATWBATDD

Motif ID:	UP00180
Motif name:	Hoxd13
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	3
Number of overlap:	12

Similarity score: 0.0123772
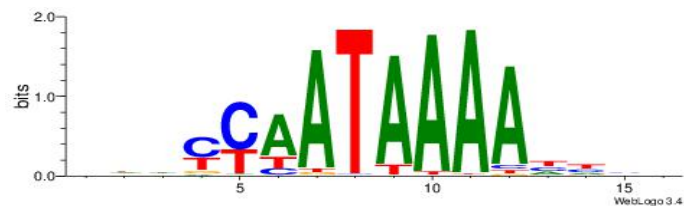
Alignment:
HDHHTTTTATTKKHDD
--WHTATTATTTDH--

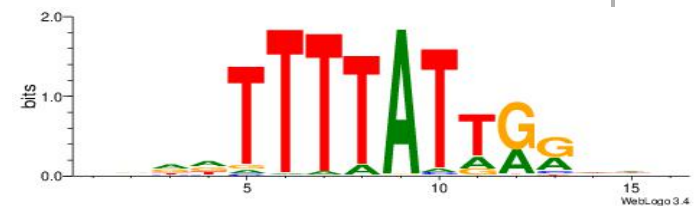Original motif   Reverse complement motif
Consensus sequence: HDHYYAATAAAAHHHH   Consensus sequence: HDHHTTTTATTKKHDD

Motif ID: UP00037
Motif name: Zfp105_primary
Species: Mus musculus
Matching format of first motif: Reverse Complement
Matching format of second motif: Reverse Complement
Direction: Forward
Position number: 3
Number of overlap: 12
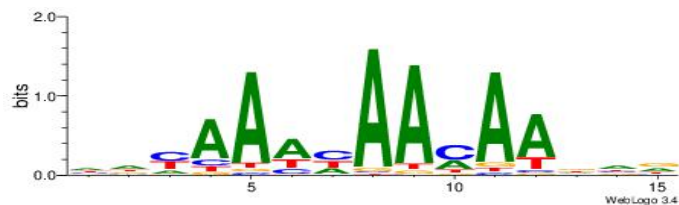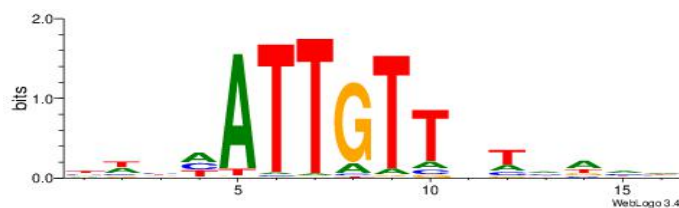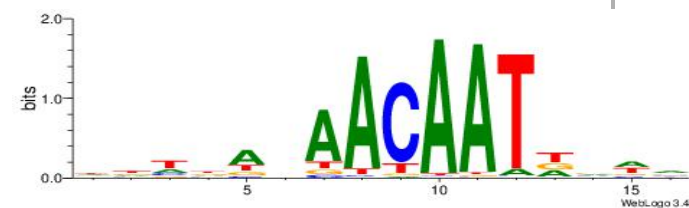Similarity score: 0.0129559

Alignment:
HHHTTRTTDTTTKDH
--WHTATTATTTDH-

Original motif   Reverse complement motif
Consensus sequence: HDYAAAHAAMAADHD   Consensus sequence: HHHTTRTTDTTTKDH
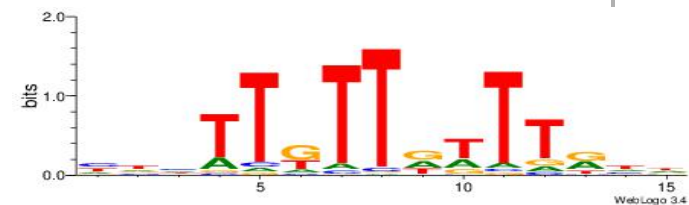
Motif ID: [UP00064](UP00064)

Motif name: Sox18_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 4

Number of overlap: 12

Similarity score: 0.0130138

Alignment:

```
HHDHABAACAATHBWV
---HDAAATAATAHW-
```

Original motif   Reverse complement motif

Consensus sequence: BWBHATTGTTBTHDHH   Consensus sequence: HHDHABAACAATHBWV

Motif ID: UP00255

Motif name: Dbx1

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 4

Number of overlap: 12

Similarity score: 0.0131034

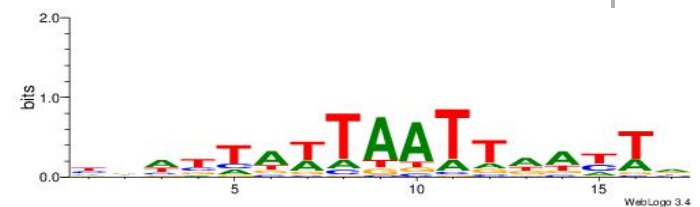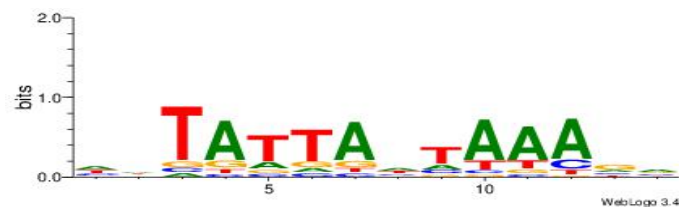Alignment:
```
DHDBTAWTAATTHAKTH
--WHTATTATTTDH---
```

Original motif

Consensus sequence: HARTHAATTAWTAVDHD
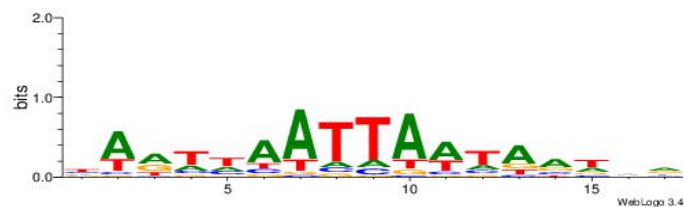
Reverse complement motif

Consensus sequence: DHDBTAWTAATTHAKTH

Motif ID: UP00024

Motif name: Glis2_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 1

Number of overlap: 12

Similarity score: 0.0140433

Alignment:
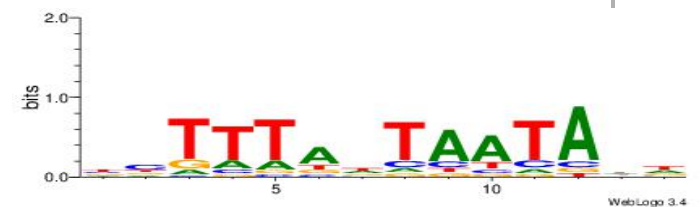
```
BVTTTAHTAATADH
--HDAAATAATAHW
```


Original motif   Reverse complement motif

Consensus sequence: HDTATTAHTAAAVV   Consensus sequence: BVTTTAHTAATADH

Motif ID: UP00075

Motif name: Sox15_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 3

Number of overlap: 12

Similarity score: 0.0143532
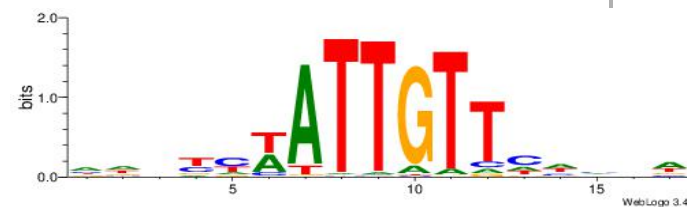

Alignment:

```
DHVKMWATTGTTHDHDH
---WHTATTATTTDH--
```


Original motif   Reverse complement motif

Consensus sequence: HDDDDAACAATWRRBHD
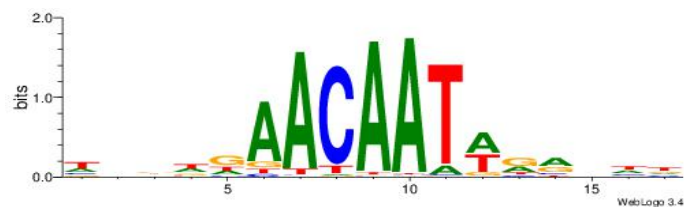
Consensus sequence: DHVKMWATTGTTHDHDH

Motif ID:	UP00096
Motif name:	Sox13_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Original Motif
Direction:	Forward
Position number:	3
Number of overlap:	12
Similarity score:	0.014607

Alignment:

```
DHDRGAACAATWWDHW
--HDAAATAATAHW--
```

Original motif

Consensus sequence: DHDRGAACAATWWDHW
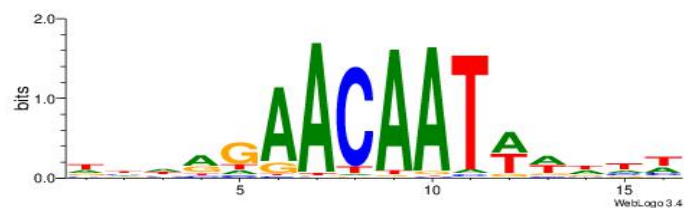
Reverse complement motif

Consensus sequence: WHDWWATTGTTCKDHD
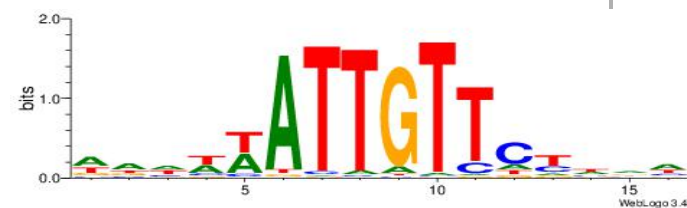
Dataset #: 2   Motif ID: 16   Motif name: kcACCTGCAgc

Original motif

Consensus sequence: BCACCTGCABC

Reverse complement motif

Consensus sequence: GBTGCAGGTGB
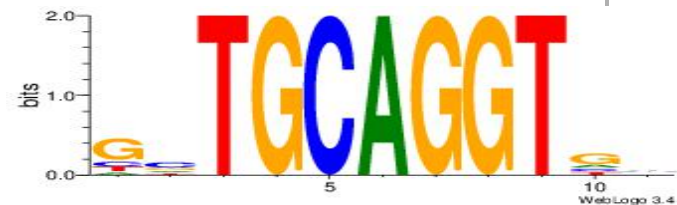
Best Matches for Motif ID 16 (Highest to Lowest)

Motif ID:	UP00070
Motif name:	Gcm1_primary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	4
Number of overlap:	11
Similarity score:	0

Alignment:

```
DHDVATGCGGGTHVVH
---GBTGCAGGTGB--
```

Original motif

Consensus sequence: HVVHACCCGCATVDHD

Reverse complement motif

Consensus sequence: DHDVATGCGGGTHVVH
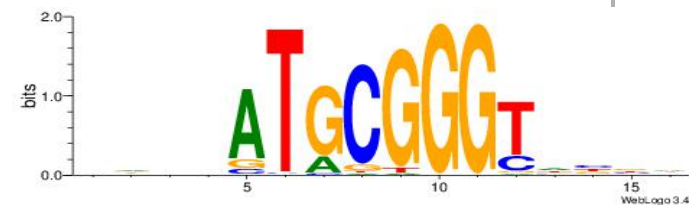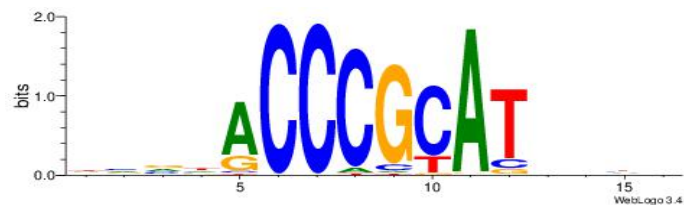
Motif ID: UP00031
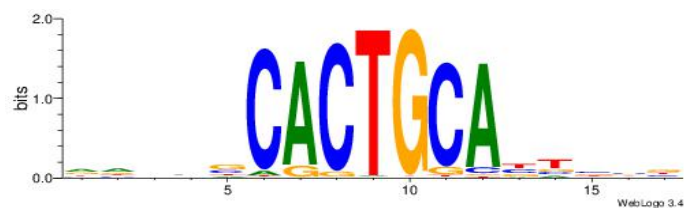
Motif name: Zbtb3_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 4

Number of overlap: 11

Similarity score: 0.000503863

Alignment:

```
BBBAVTGCAGTGBBVDD
---GBTGCAGGTGB---
```

Original motif   Reverse complement motif
Consensus sequence: DDBBBCACTGCABTBBB   Consensus sequence: BBBAVTGCAGTGBBVDD
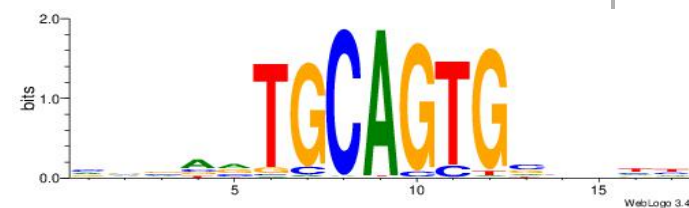
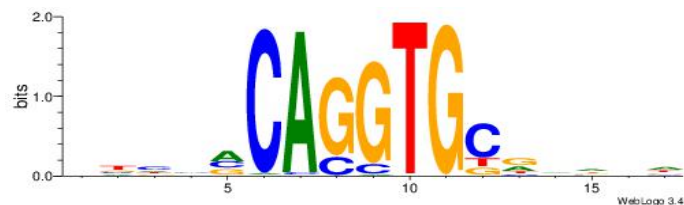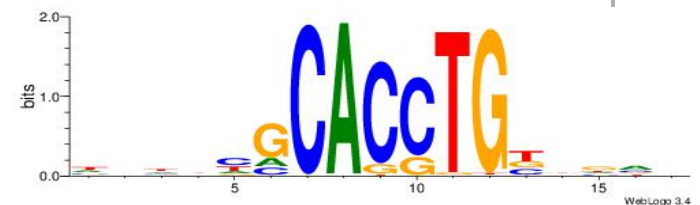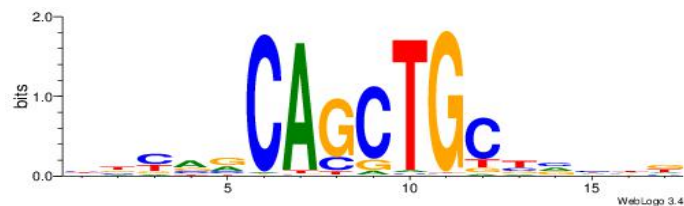Motif ID: UP00046

Motif name: Tcfe2a_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 6

Number of overlap: 11

Similarity score: 0.000557448

Alignment:

```
DHDBHGCACCTGBDDVB
-----BCACCTGCABC-
```

Original motif

Consensus sequence: VBHHVCAGGTGCDVDHD

Reverse complement motif

Consensus sequence: DHDBHGCACCTGBDDVB

Motif ID: UP00099

Motif name: Ascl2_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 3

Number of overlap: 11

Similarity score: 0.00842747
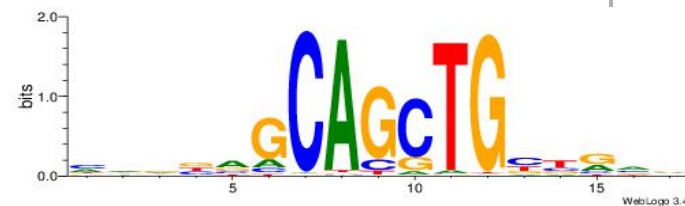
Alignment:
```
BBYVVCAGCTGCBVHHD
----BCACCTGCABC--
```

Original motif
Consensus sequence: BBYVVCAGCTGCBVHHD

Reverse complement motif
Consensus sequence: HHDVVGCAGCTGVBKVB





Motif ID: UP00420

Motif name: Elk3

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 5

Number of overlap: 11

Similarity score: 0.0111732

Alignment:
```
DVBBACCGGAAGYDVVV
--BCACCTGCABC----
```

Original motif
Consensus sequence: DVBBACCGGAAGYDVVV

Reverse complement motif
Consensus sequence: VBVDMCTTCCGGTVBVD
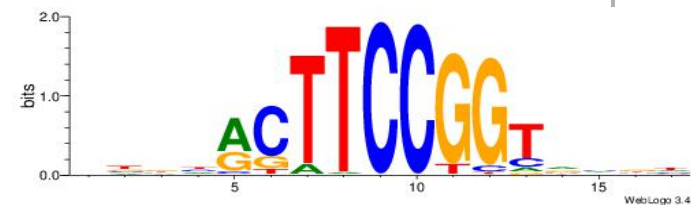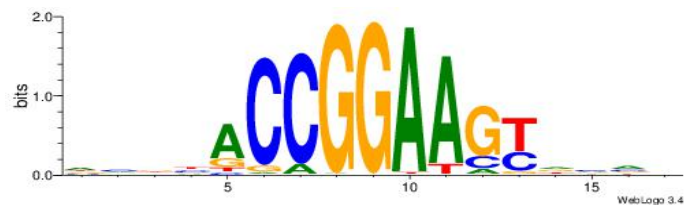
Motif ID:                                     [UP00050](UP00050)
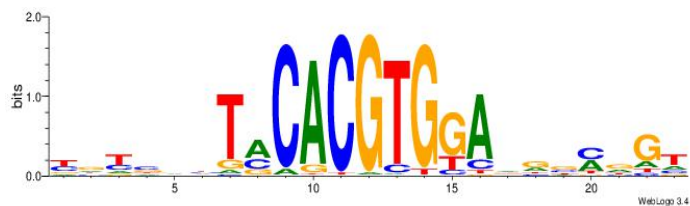
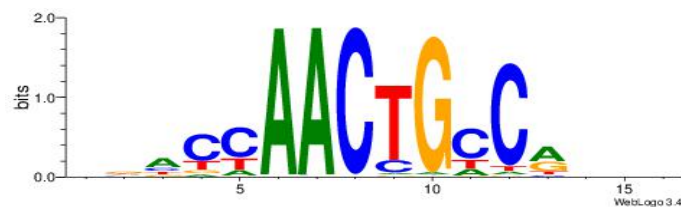Motif name:                                   Bhlhb2_secondary

Species:                                       Mus musculus

Matching format of first motif:               Original Motif

Matching format of second motif:              Reverse Complement

Direction:                                     Forward

Position number:                              9

Number of overlap:                            11

Similarity score:                             0.0122671

Alignment:

```
ACHRBHDTCCACGTGYAHHBMHM
--------BCACCTGCABC----
```

Original motif   Reverse complement motif

Consensus sequence: YDYBDHTMCACGTGGADDBMDGT   Consensus sequence: ACHRBHDTCCACGTGYAHHBMHM
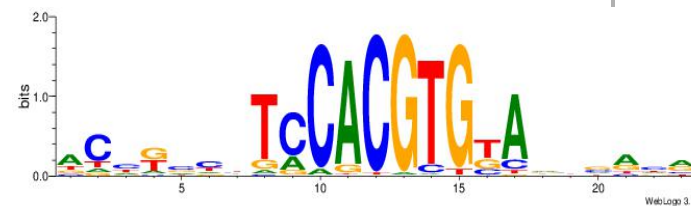
Motif ID: UP00092

Motif name: Myb_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 3

Number of overlap: 11

Similarity score: 0.015733

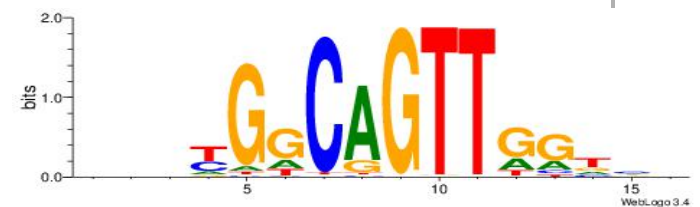Alignment:
```
BDACCAACTGCCRBBH
---BCACCTGCABC--
```

Original motif

Consensus sequence: BDACCAACTGCCRBBH

Reverse complement motif

Consensus sequence: DBVKGGCAGTTGGTHB

Motif ID: UP00236

Motif name: Irx2

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement
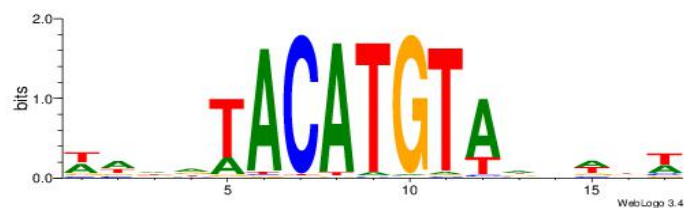
Direction: Backward

Position number: 4

Number of overlap: 11

Similarity score: 0.0163141
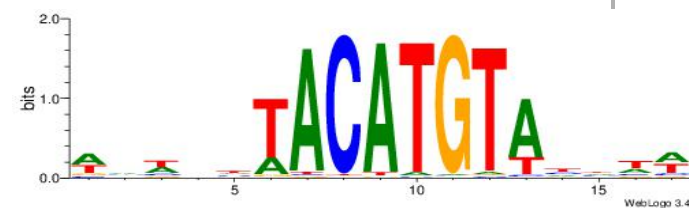
Alignment:
```
WVWDDTACATGTADDDW
---GBTGCAGGTGB---
```

Original motif
Consensus sequence: WDDDTACATGTADDWBW

Reverse complement motif
Consensus sequence: WVWDDTACATGTADDDW

Motif ID: UP00223

Motif name: Irx3_0920.1

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 5

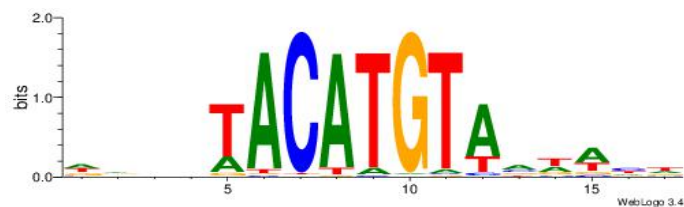Number of overlap: 11

Similarity score: 0.0165255

Alignment:
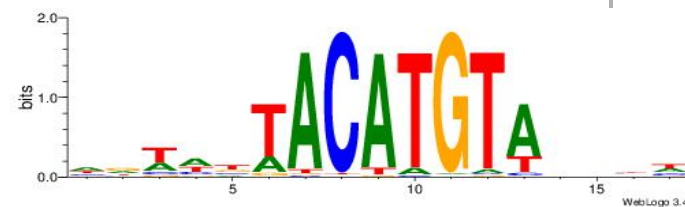```
DDWWBTACATGTADDDD
----BCACCTGCABC--
```

Original motif

Reverse complement motif

Consensus sequence: DDDDTACATGTAVWWHD

Consensus sequence: DDWWBTACATGTADDDD

Motif ID: UP00057
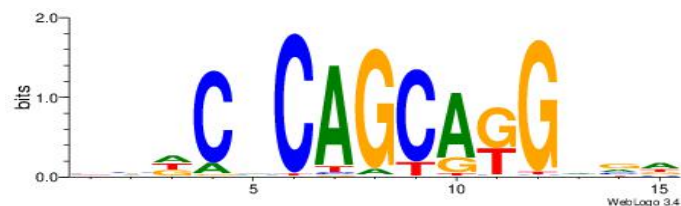Motif name: Zic2_secondary
Species: Mus musculus
Matching format of first motif: Original Motif
Matching format of second motif: Reverse Complement
Direction: Forward
Position number: 1
Number of overlap: 11
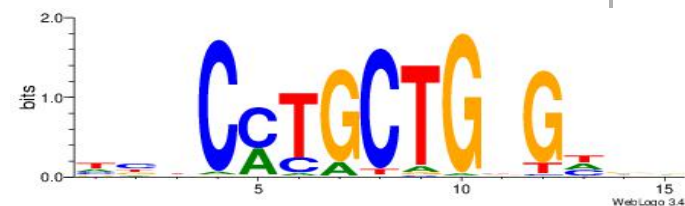Similarity score: 0.0169178

Alignment:
HHDCVCAGCAKGVVD
BCACCTGCABC----

Original motif

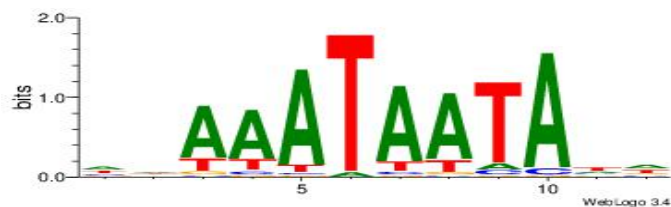Consensus sequence: HHDCVCAGCAKGVVD

Reverse complement motif

Consensus sequence: DVBCYTGCTGBGDDD

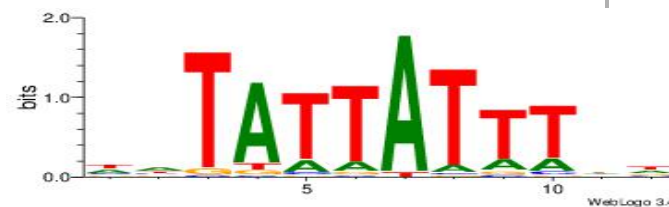**Dataset #: 2   Motif ID: 17   Motif name: wwAAATAATAtw**

Original motif

Consensus sequence: HDAAATAATADD

Reverse complement motif

Consensus sequence: DDTATTATTTDH

Best Matches for Motif ID 17 (Highest to Lowest)

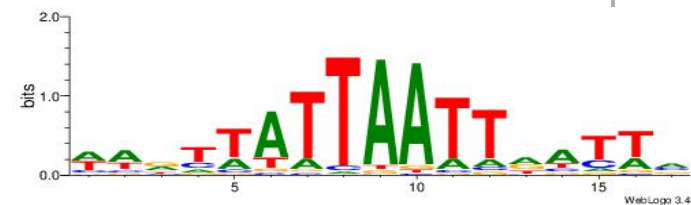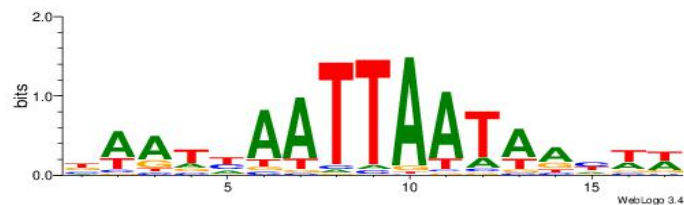|	
Motif ID:	UP00244
Motif name:	Tlx2
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	4
Number of overlap:	12
Similarity score:	0.00576686

Alignment:

```
WWDTTATTAATTHATTV
--DDTATTATTTDH---
```

Original motif

Consensus sequence: BAATHAATTAATAAHWW

Reverse complement motif
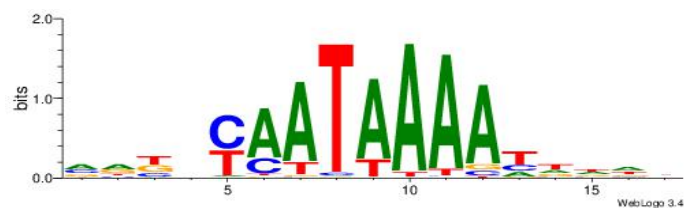
Consensus sequence: WWDTTATTAATTHATTV

Motif ID:	UP00121
Motif name:	Hoxd10
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	4
Number of overlap:	12
Similarity score:	0.00673636

Alignment:
```
HDDDATTTTATTKVRDB
---DDTATTATTTDH--
```
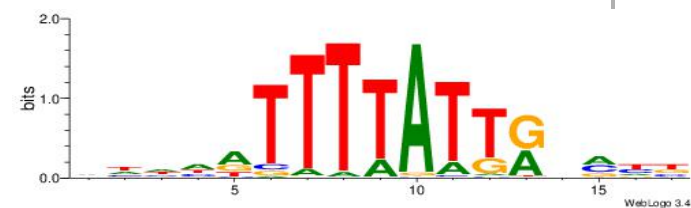
Original motif
Consensus sequence: VDKVYAATAAAATDDDH

Reverse complement motif
Consensus sequence: HDDDATTTTATTKVRDB

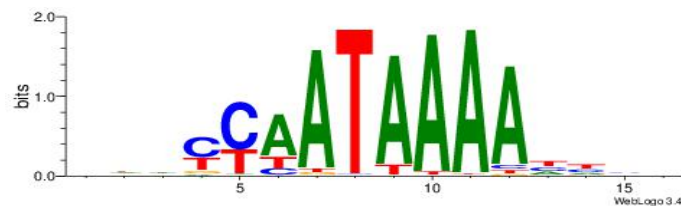Motif ID: UP00180

Motif name: Hoxd13

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 3

Number of overlap: 12

Similarity score: 0.00685179

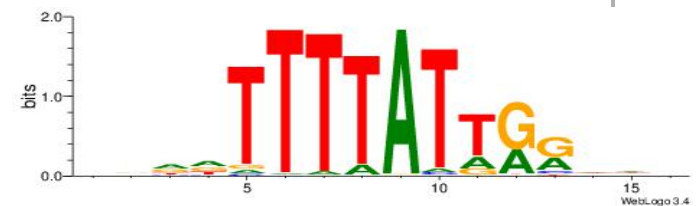Alignment:
```
HDHHTTTTATTKKHDD
--DDTATTATTTDH--
```

Original motif

Consensus sequence: HDHYYAATAAAAHHHH

Reverse complement motif

Consensus sequence: HDHHTTTTATTKKHDD

Motif ID: UP00073

Motif name: Foxa2_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Forward

Position number: 1

Number of overlap: 12
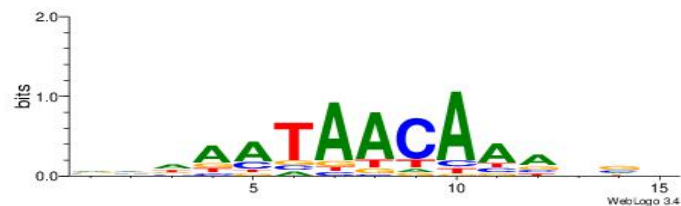
Similarity score: 0.0108327

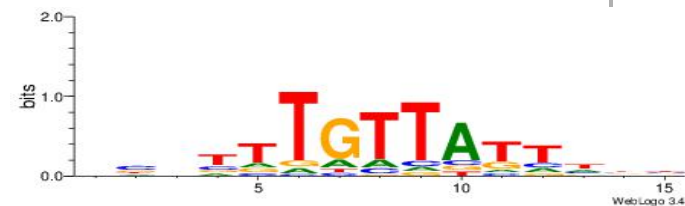Alignment:
```
VVDAATAACAAAVVB
HDAAATAATADD---
```

Original motif   Reverse complement motif
Consensus sequence: VVDAATAACAAAVVB   Consensus sequence: BVVTTTGTTATTDBB

Motif ID: UP00134
Motif name: Hoxb13
Species: Mus musculus
Matching format of first motif: Reverse Complement
Matching format of second motif: Reverse Complement
Direction: Backward
Position number: 3
Number of overlap: 12
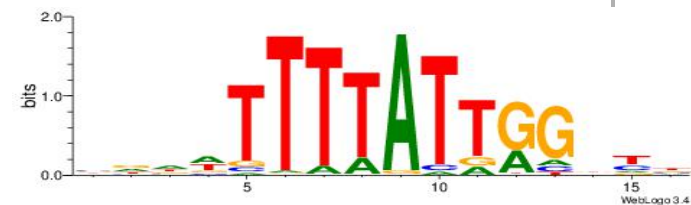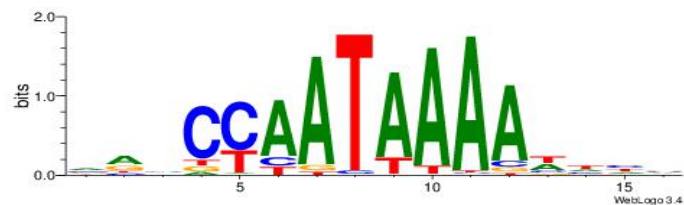Similarity score: 0.0121723

Alignment:
```
VDHWTTTTATTGGDKB
--DDTATTATTTDH--
```

Original motif   Reverse complement motif
Consensus sequence: VRHCCAATAAAAWHHV   Consensus sequence: VDHWTTTTATTGGDKB

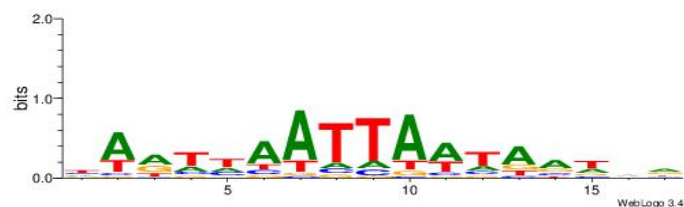Motif ID: UP00255
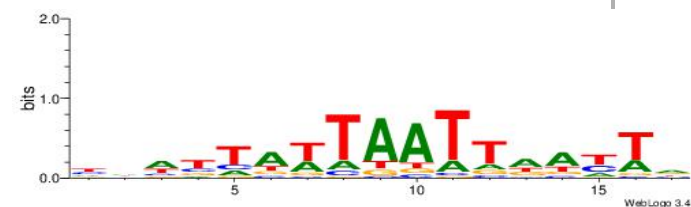
Motif name: Dbx1

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 4

Number of overlap: 12

Similarity score: 0.0133808

Alignment:

```
DHDBTAWTAATTHAKTH
--DDTATTATTTDH---
```

Original motif

Consensus sequence: HARTHAATTAWTAVDHD

Reverse complement motif

Consensus sequence: DHDBTAWTAATTHAKTH

Motif ID: UP00034
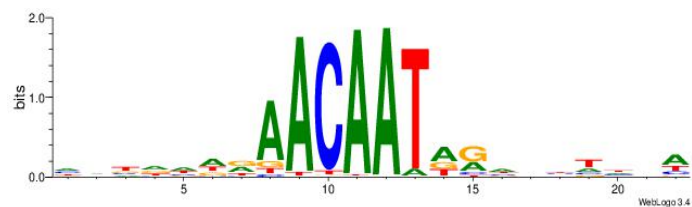
Motif name: Sox7_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Forward

Position number: 5

Number of overlap: 12
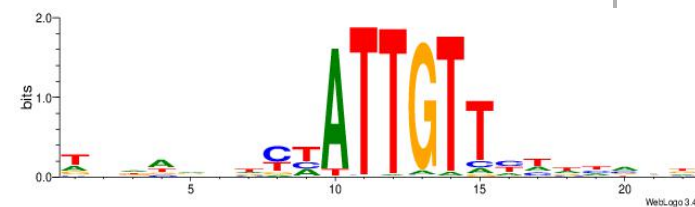
Similarity score: 0.0144702

Alignment:

```
HHBDHDDAACAATDRHHHHHBW
----HDAAATAATADD------
```

Original motif   Reverse complement motif

Consensus sequence: HHBDHDDAACAATDRHHHHHBW   Consensus sequence: WBHHHHHMDATTGTTHDHDVHH

Motif ID: UP00051

Motif name: Sox8_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif
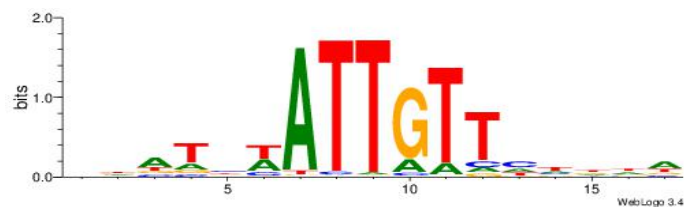
Direction: Backward

Position number: 3

Number of overlap: 12
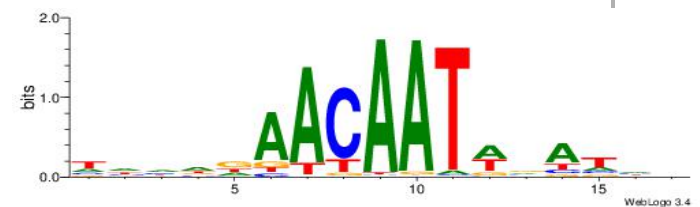
Similarity score: 0.0145614

Alignment:

```
DDATBWATTGTTHHDDD
---DDTATTATTTDH--
```

Original motif   Reverse complement motif

Consensus sequence: DDATBWATTGTTHHDDD   Consensus sequence: DDDHDAACAATWBATDD

Motif ID: UP00024

Motif name: Glis2_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 3

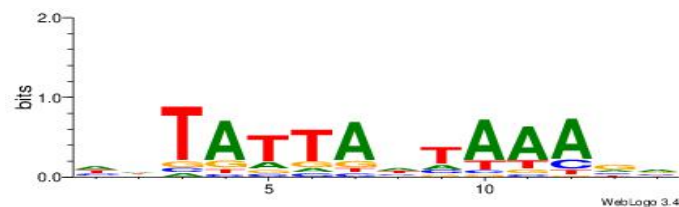Number of overlap: 12

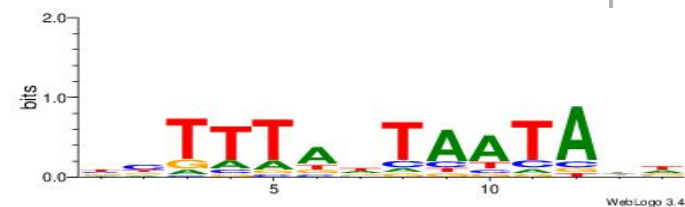Similarity score: 0.0148858

Alignment:

```
BVTTTAHTAATADH
--HDAAATAATADD
```

Original motif   Reverse complement motif

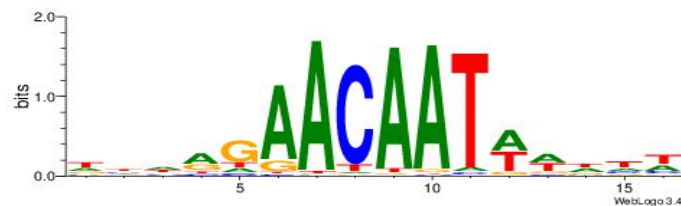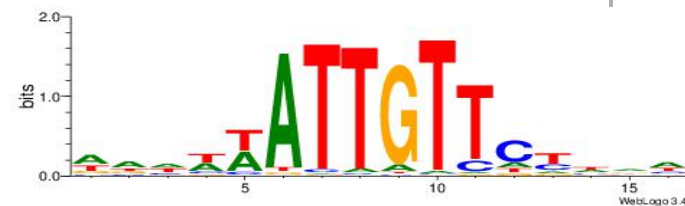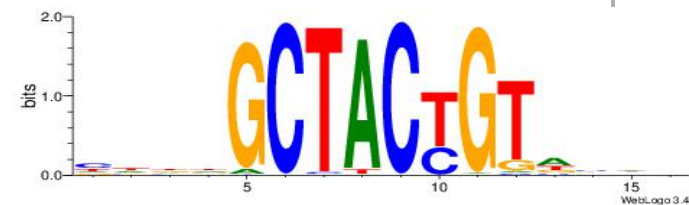Consensus sequence: HDTATTAHTAAAVV

Consensus sequence: BVTTTAHTAATADH

Motif ID:	UP00096
Motif name:	Sox13_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Original Motif
Direction:	Backward
Position number:	3
Number of overlap:	12
Similarity score:	0.014968

Alignment:

```
DHDRGAACAATWWDHW
--HDAAATAATADD--
```

Original motif

Consensus sequence: DHDRGAACAATWWDHW

Reverse complement motif

Consensus sequence: WHDWWATTGTTCKDHD

Dataset #: 2   Motif ID: 19   Motif name: wsTACwGTAsw

Original motif

Consensus sequence: HVTACWGTABD

Reverse complement motif

Consensus sequence: DBTACWGTAVH

Best Matches for Motif ID 19 (Highest to Lowest)

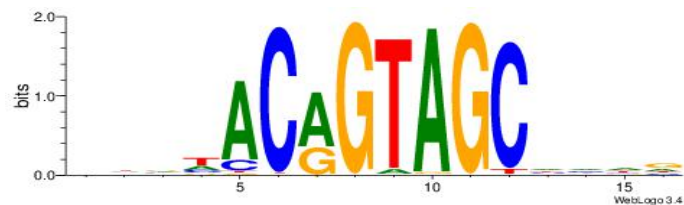|	
Motif ID:	UP00052
Motif name:	Osr2_primary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	2
Number of overlap:	11
Similarity score:	0

Alignment:

```
HHHHGCTACKGTHVHH
----DBTACWGTAVH-
```

Original motif

Consensus sequence: HHVHACRGTAGCHHHD

Reverse complement motif
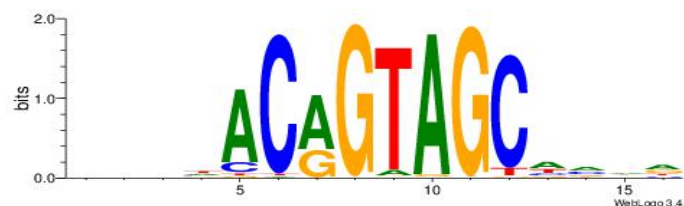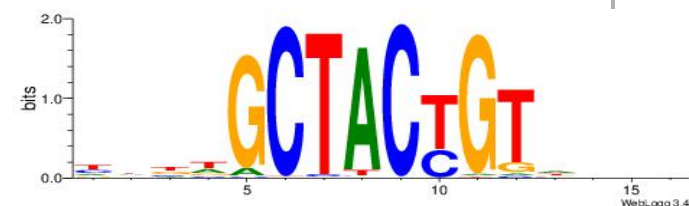
Consensus sequence: HHHHGCTACKGTHVHH

Motif ID:	UP00027
Motif name:	Osr1_primary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	2
Number of overlap:	11
Similarity score:	0.00480574

Alignment:
```
DHBHGCTACKGTHDHH
----DBTACWGTAVH-
```

Original motif
Consensus sequence: HHDHACRGTAGCHVHD

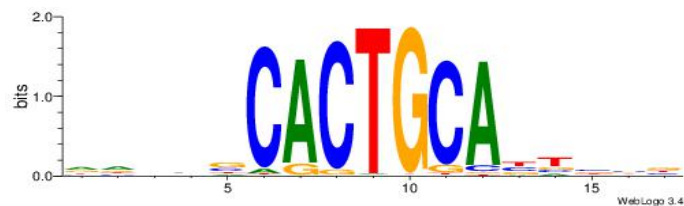Reverse complement motif
Consensus sequence: DHBHGCTACKGTHDHH

Motif ID:	UP00031

Motif name: Zbtb3_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 4

Number of overlap: 11

Similarity score: 0.0165381
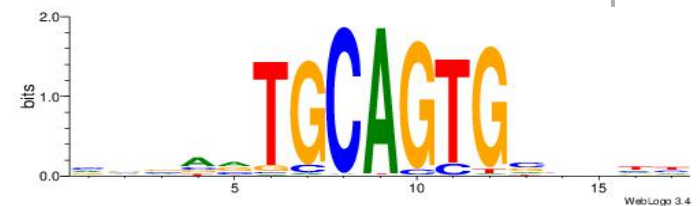
Alignment:

```
BBBAVTGCAGTGBBVDD
---HVTACWGTABD---
```

Original motif

Consensus sequence: DDBBBCACTGCABTBBB

Reverse complement motif

Consensus sequence: BBBAVTGCAGTGBBVDD

Motif ID: UP00034

Motif name: Sox7_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Backward

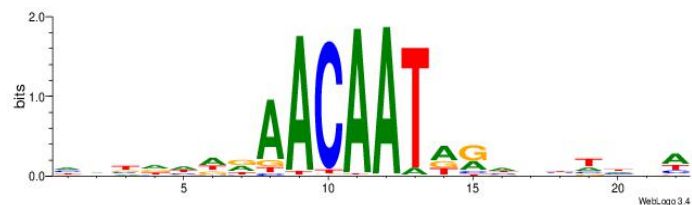Position number: 7

Number of overlap: 11

Similarity score: 0.0248017

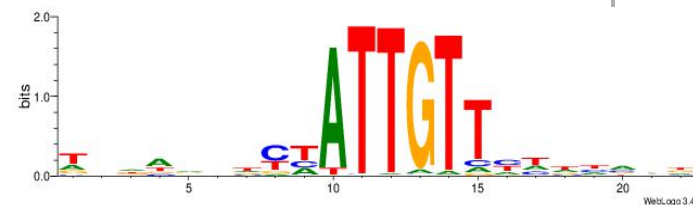Alignment:

```
HHBDHDDAACAATDRHHHHHBW
-----DBTACWGTAVH------
```

Original motif

Consensus sequence: HHBDHDDAACAATDRHHHHHBW

Reverse complement motif

Consensus sequence: WBHHHHHHMDATTGTTHDHDVHH

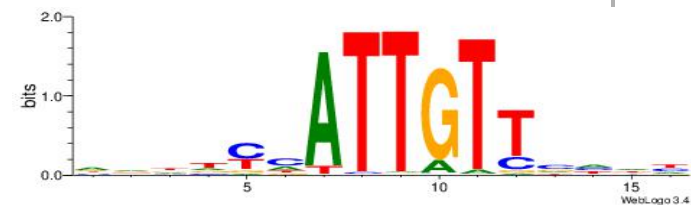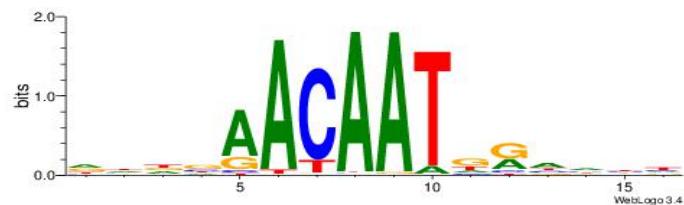|	
Motif ID:	UP00023
Motif name:	Sox30_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	3
Number of overlap:	11
Similarity score:	0.0294174

Alignment:

```
HHHHMHATTGTTBDHD
---HVTACWGTABD--
```

Original motif

Consensus sequence: DHDBAACAATDRHHHH

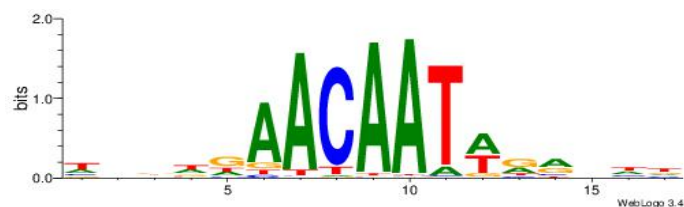Reverse complement motif

Consensus sequence: HHHHMHATTGTTBDHD

Motif ID:	[UP00075](UP00075)
Motif name:	Sox15_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	4
Number of overlap:	11
Similarity score:	0.0301544

Alignment:
```
DHVKMWATTGTTHDHDH
---HVTACWGTABD---
```
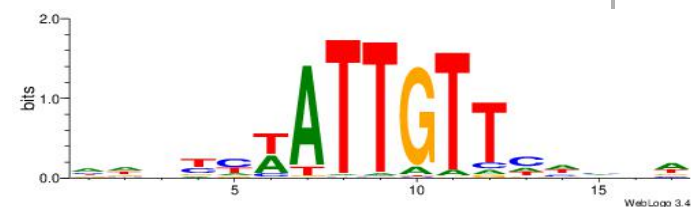
Original motif
Consensus sequence: HDDDDAACAATWRRBHD

Reverse complement motif
Consensus sequence: DHVKMWATTGTTHDHDH
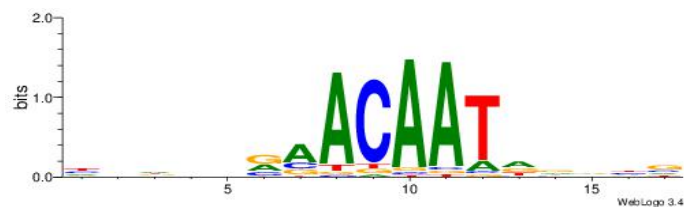
Motif ID: UP00016

Motif name: Sry_secondary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 5

Number of overlap: 11

Similarity score: 0.0310991

Alignment:

```
VHVHDATTGTTMHDDDH
--DBTACWGTAVH----
```
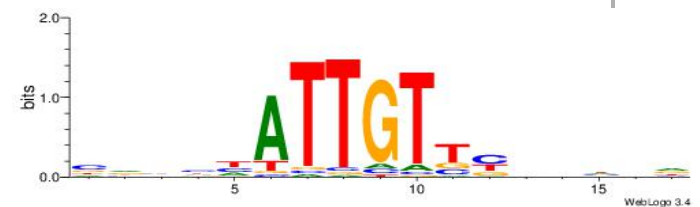
Original motif

Consensus sequence: HHDHDRAACAATDDVHV

Reverse complement motif

Consensus sequence: VHVHDATTGTTMHDDDH

Motif ID: UP00064

Motif name: Sox18_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

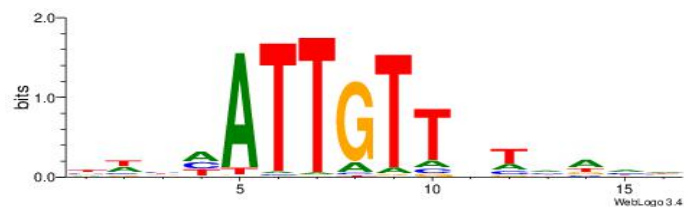Direction: Forward

Position number: 2

Number of overlap: 11

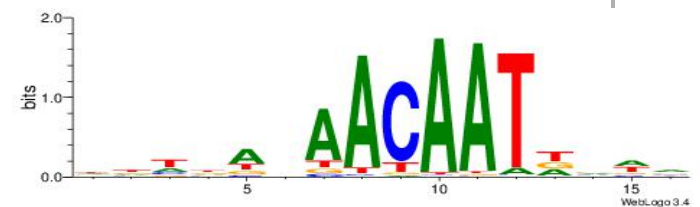Similarity score: 0.031364

Alignment:

BWBHATTGTTBTHDHH

-DBTACWGTAVH----

Original motif   Reverse complement motif

Consensus sequence: BWBHATTGTTBTHDHH   Consensus sequence: HHDHABAACAATHBWV

Motif ID: [UP00092](UP00092)

Motif name: Myb_primary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Backward

Position number: 4

Number of overlap: 11

Similarity score: 0.0314236
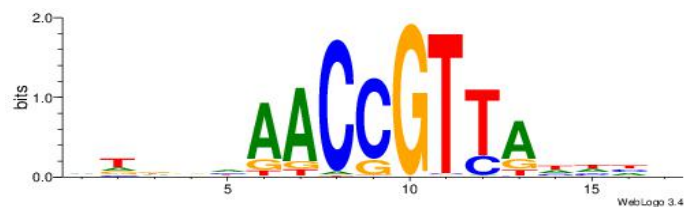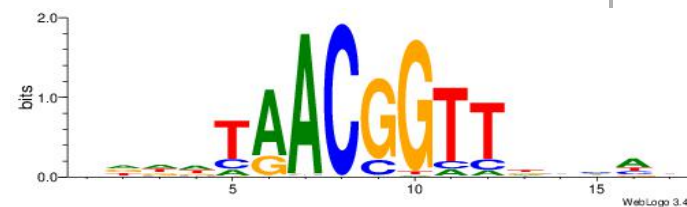
Alignment:

HDDDHAACCGTTAHHHD

---DBTACWGTAVH---

Original motif   Reverse complement motif

Consensus sequence: HDDDHAACCGTTAHHHD
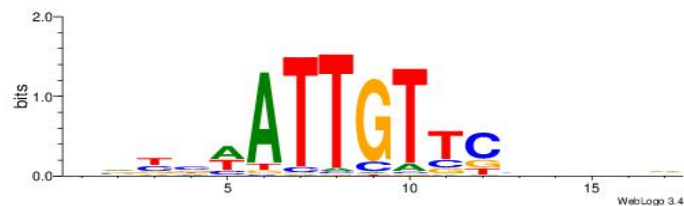

Consensus sequence: DHHHTAACGGTTHHHDH

Motif ID: [UP00071](UP00071)

Motif name: Sox21_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 5

Number of overlap: 11

Similarity score: 0.0319794
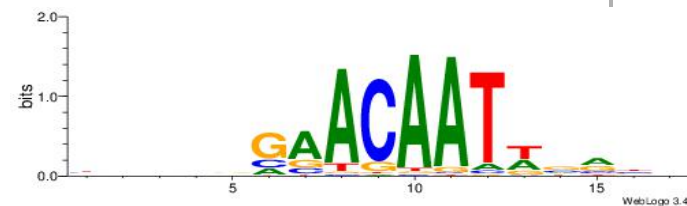
Alignment:

```
VVYBWATTGTTCVBHDV
--HVTACWGTABD----
```

Original motif

Consensus sequence: VVYBWATTGTTCVBHDV
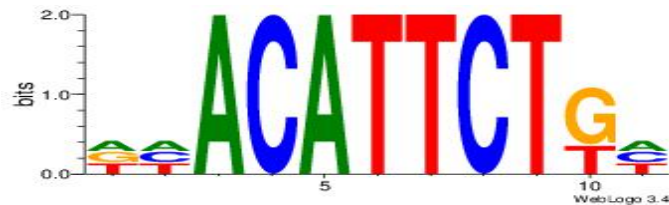

Reverse complement motif

Consensus sequence: BDDBVGAACAATWBMBV

Dataset #: 2   Motif ID: 20   Motif name: dhACATTCTkh

Original motif

Consensus sequence: DHACATTCTGH

Reverse complement motif

Consensus sequence: HCAGAATGTHD

Best Matches for Motif ID 20 (Highest to Lowest)

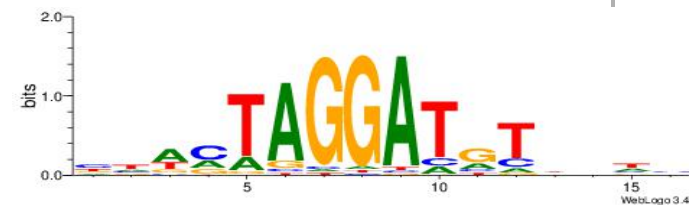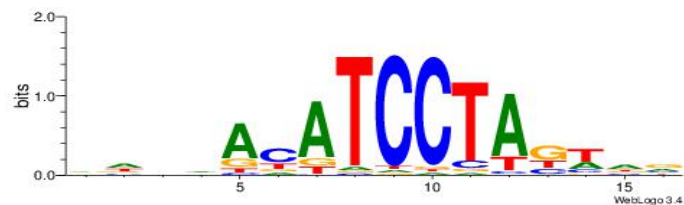|	
Motif ID:	UP00038
Motif name:	Spdef_secondary
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	4
Number of overlap:	11
Similarity score:	0.00581553

Alignment:

```
VDWYTAGGATGTHVDH
---HCAGAATGTHD--
```

Original motif

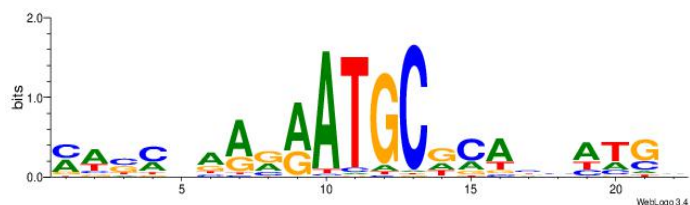Consensus sequence: DDBHACATCCTAKWDV

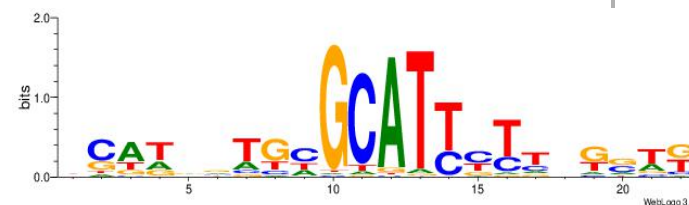Reverse complement motif

Consensus sequence: VDWYTAGGATGTHVDH

Motif ID: UP00528

Motif name: Foxm1_secondary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 8

Number of overlap: 11

Similarity score: 0.00582895

Alignment:

```
DCATDBTGHGCATKMTTBRSWR
-------DHACATTCTGH----
```

Original motif

Consensus sequence: MWSMBAARRATGCDCABHATGD

Reverse complement motif

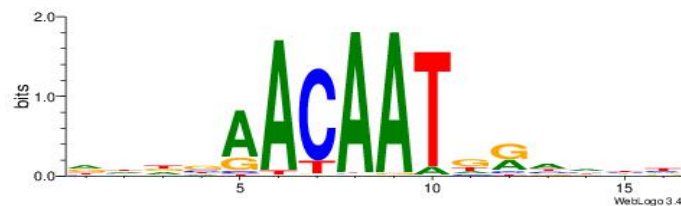Consensus sequence: DCATDBTGHGCATKMTTBRSWR

Motif ID: UP00023

Motif name:	Sox30_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	4
Number of overlap:	11
Similarity score:	0.00613057

Alignment:

```
HHHHMHATTGTTBDHD
--DHACATTCTGH---
```
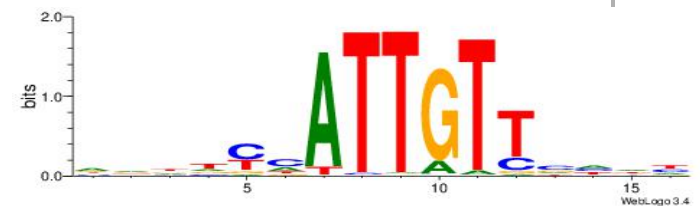
Original motif

Consensus sequence: DHDBAACAATDRHHHH

Reverse complement motif

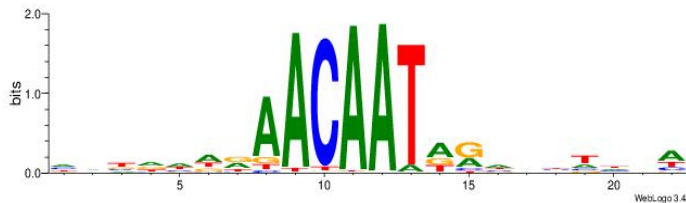Consensus sequence: HHHHMHATTGTTBDHD

Motif ID:	UP00034
Motif name:	Sox7_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Reverse Complement
Direction:	Forward
Position number:	6
Number of overlap:	11

Similarity score: 0.0119275

Alignment:
WBHHHHHMDATTGTTHDHDVHH
-----DHACATTCTGH------

Original motif   Reverse complement motif
Consensus sequence: HHBDHDDAACAATDRHHHHHBW   Consensus sequence: WBHHHHHMDATTGTTHDHDVHH

Motif ID: UP00030
Motif name: Sox11_primary
Species: Mus musculus
Matching format of first motif: Original Motif
Matching format of second motif: Reverse Complement
Direction: Forward
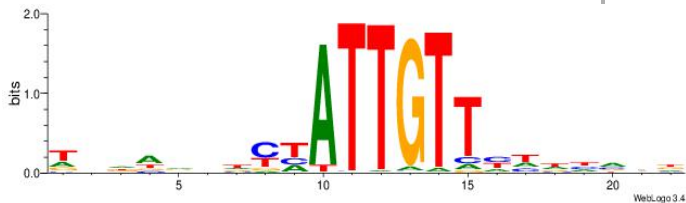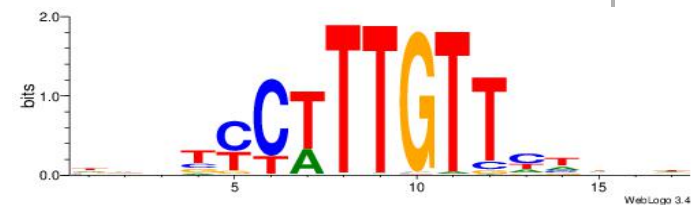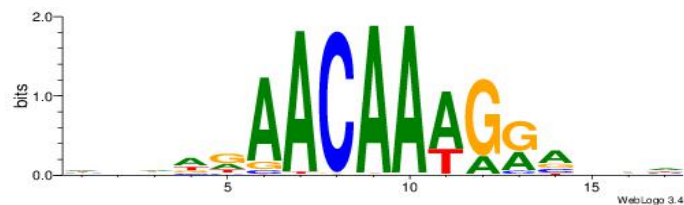Position number: 3
Number of overlap: 11
Similarity score: 0.0122803

Alignment:
HHBTMCTTTGTTMDDVH
--DHACATTCTGH----

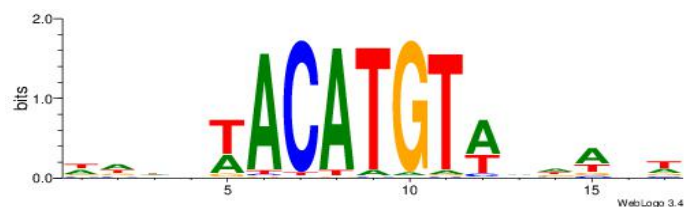Original motif   Reverse complement motif
Consensus sequence: HBDDRAACAAAGRABHH   Consensus sequence: HHBTMCTTTGTTMDDVH

Motif ID: UP00250

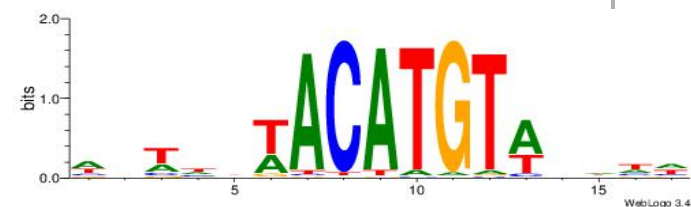Motif name: Irx5

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Backward

Position number: 3

Number of overlap: 11

Similarity score: 0.0132772

Alignment:
WVTDHWACATGTWHDDD
----DHACATTCTGH--

Original motif   Reverse complement motif

Consensus sequence: DDDHWACATGTWHDABW   Consensus sequence: WVTDHWACATGTWHDDD

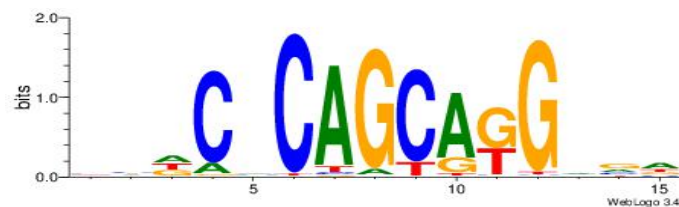
Motif ID: UP00057

Motif name: Zic2_secondary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Backward

Position number: 1

Number of overlap: 11

Similarity score: 0.0141401
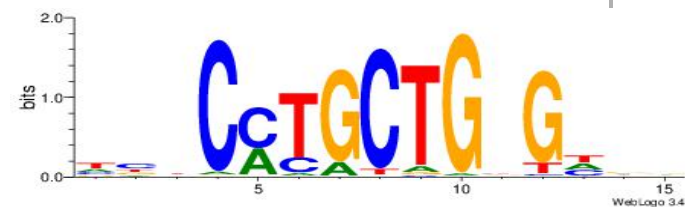
Alignment:

```
DVBCYTGCTGBGDDD
----HCAGAATGTHD
```

Original motif

Consensus sequence: HHDCVCAGCAKGVVD

Reverse complement motif

Consensus sequence: DVBCYTGCTGBGDDD

Motif ID: UP00062

Motif name: Sox4_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 3
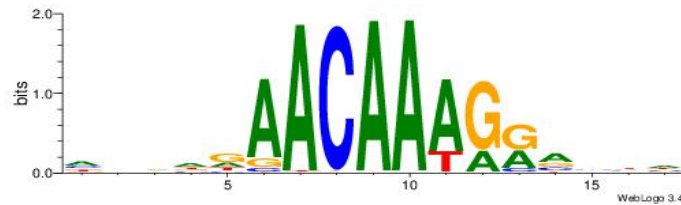
Number of overlap: 11

Similarity score: 0.0143902

Alignment:

```
HHBBMCTTTGTTHDDBH
--DHACATTCTGH----
```
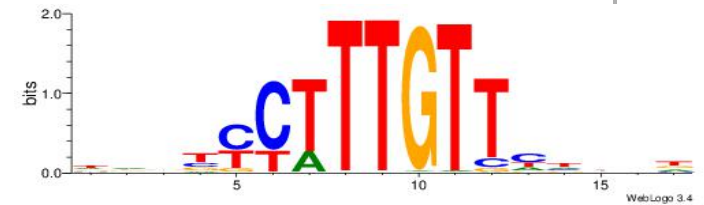
Original motif

Consensus sequence: HBDDDAACAAAGRVBHH

Reverse complement motif

Consensus sequence: HHBBMCTTTGTTHDDBH

Motif ID: UP00004

Motif name: Sox14_secondary

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Backward

Position number: 2

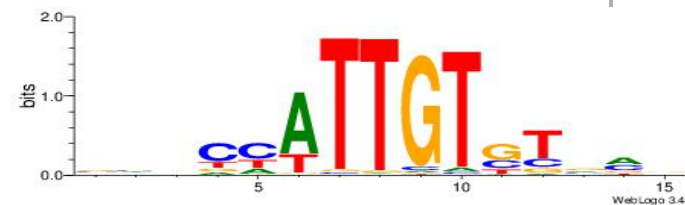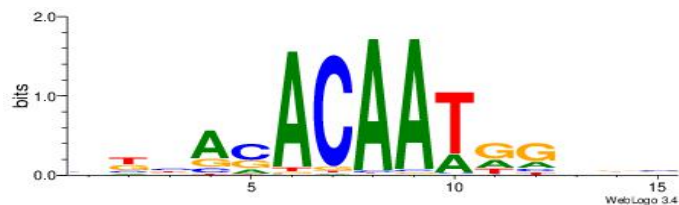Number of overlap: 11

Similarity score: 0.0151959

Alignment:

```
BKBASACAATRGHBB
---HCAGAATGTHD-
```

Original motif

Consensus sequence: BKBASACAATRGHBB

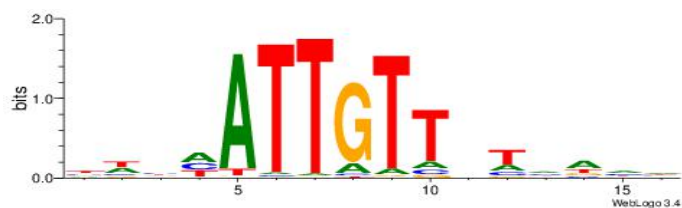Reverse complement motif

Consensus sequence: BBDCMATTGTSTBRB

|	
Motif ID:	UP00064
Motif name:	Sox18_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Original Motif
Direction:	Forward
Position number:	1
Number of overlap:	11
Similarity score:	0.015273

Alignment:
BWBHATTGTTBTHDHH
DHACATTCTGH-----

Original motif
Consensus sequence: BWBHATTGTTBTHDHH

Reverse complement motif
Consensus sequence: HHDHABAACAATHBWV
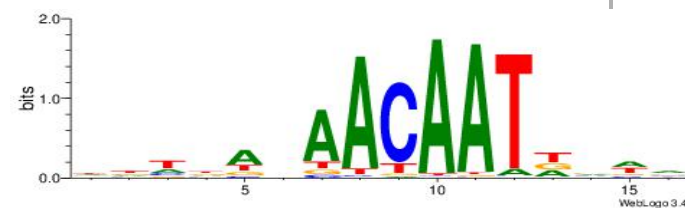
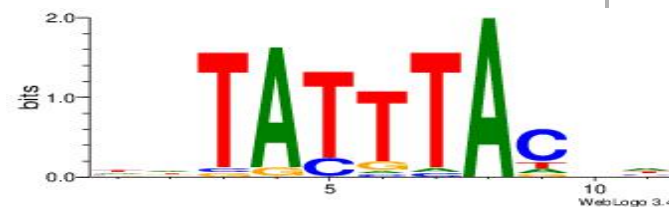**Dataset #: 2   Motif ID: 21   Motif name: wbgTAAATAww**

Original motif

Consensus sequence: DBGTAAATAHD

Reverse complement motif

Consensus sequence: DHTATTTACBD

Best Matches for Motif ID 21 (Highest to Lowest)

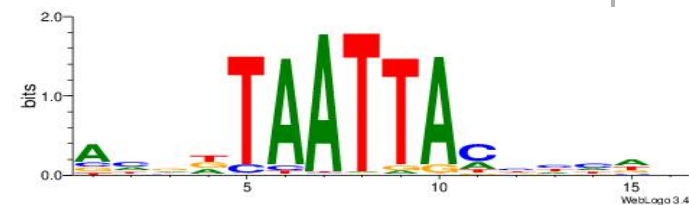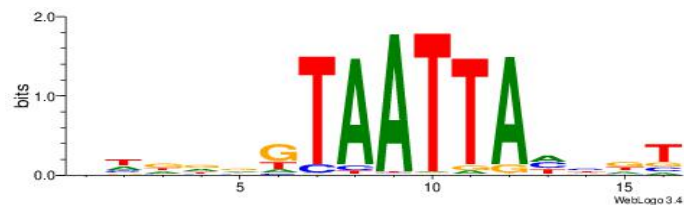|	
Motif ID:	UP00242
Motif name:	Hoxc8
Species:	Mus musculus
Matching format of first motif:	Reverse Complement
Matching format of second motif:	Reverse Complement
Direction:	Backward
Position number:	4
Number of overlap:	11
Similarity score:	0

Alignment:

```
AHDHTAATTACHHHHV
--DHTATTTACBD---
```

Original motif

Consensus sequence: BHDDDGTAATTAHHDT

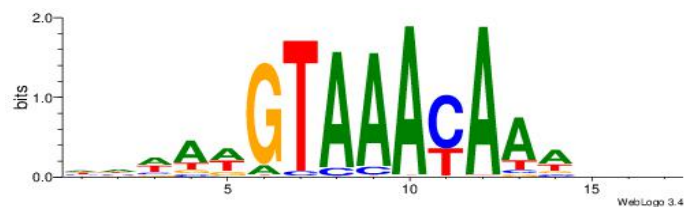Reverse complement motif

Consensus sequence: AHDHTAATTACHHHHV

Motif ID:	UP00073
Motif name:	Foxa2_primary
Species:	Mus musculus
Matching format of first motif:	Original Motif
Matching format of second motif:	Original Motif
Direction:	Backward
Position number:	4
Number of overlap:	11
Similarity score:	0.00453517

Alignment:
```
HHWAWGTAAAYAAAVDB
---DBGTAAATAHD---
```
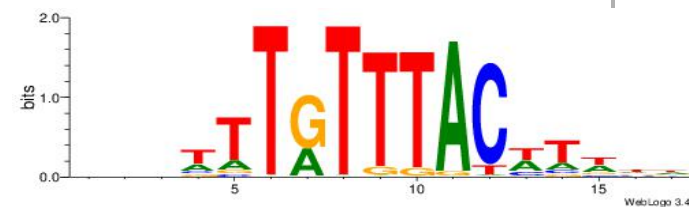
Original motif

Consensus sequence: HHWAWGTAAAYAAAVDB

Reverse complement motif

Consensus sequence: BDVTTTKTTTACWTWHH

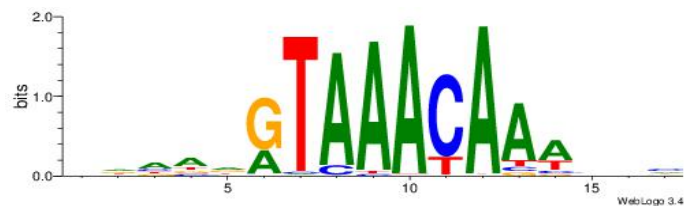Motif ID: UP00039

Motif name: Foxj3_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 4

Number of overlap: 11

Similarity score: 0.00490457

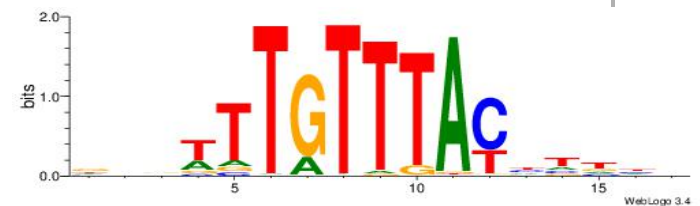Alignment:

```
HDHADGTAAACAAAVVH
---DBGTAAATAHD---
```

Original motif

Consensus sequence: HDHADGTAAACAAAVVH

Reverse complement motif

Consensus sequence: DVVTTTGTTTACDTHDH

Motif ID: UP00041

Motif name: Foxj1_primary

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Original Motif

Direction: Backward

Position number: 5

Number of overlap: 11
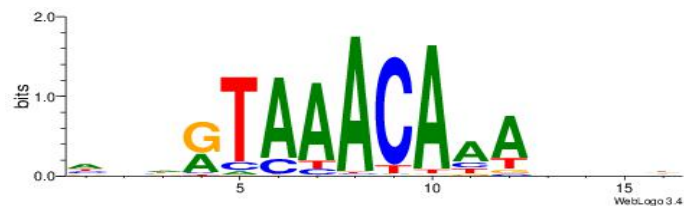
Similarity score: 0.00656547

Alignment:
```
HDHRTAAACAAAHDDD
-DBGTAAATAHD----
```
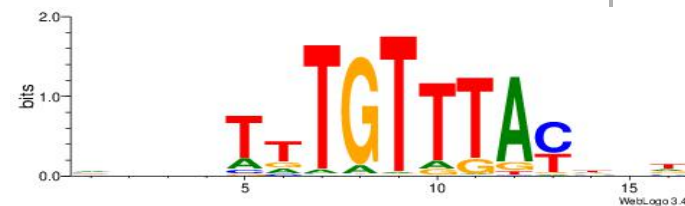
Original motif
Consensus sequence: HDHRTAAACAAAHDDD

Reverse complement motif
Consensus sequence: DDDHTTTGTTTAMHDH

Motif ID: UP00182
Motif name: Hoxa6
Species: Mus musculus
Matching format of first motif: Original Motif
Matching format of second motif: Reverse Complement
Direction: Forward
Position number: 4
Number of overlap: 11
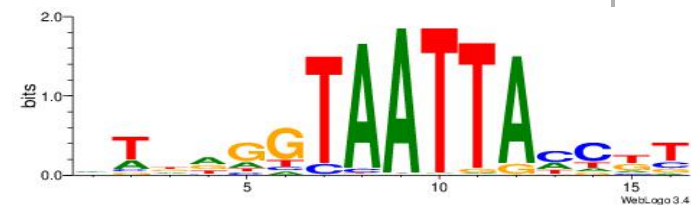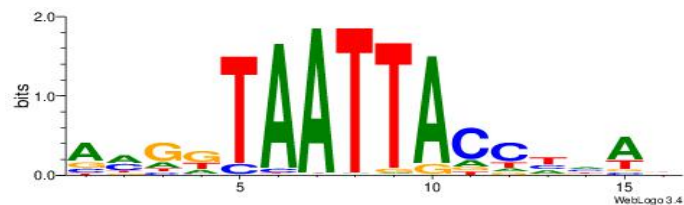Similarity score: 0.0086354

Alignment:
```
DTHHGGTAATTAYCYT
---DBGTAAATAHD--
```

Original motif
Consensus sequence: AMGKTAATTACCHHAD

Reverse complement motif
Consensus sequence: DTHHGGTAATTAYCYT

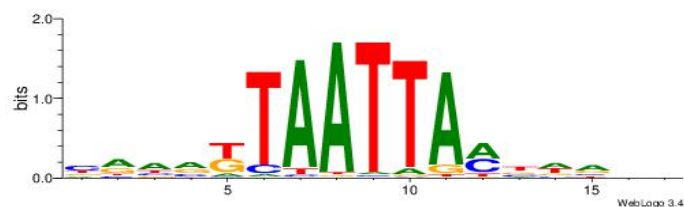Motif ID: UP00260
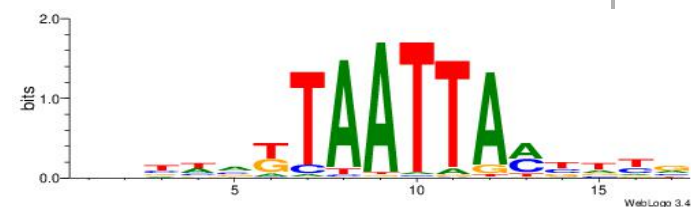
Motif name: Hoxc6

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Forward

Position number: 4

Number of overlap: 11

Similarity score: 0.0092156

Alignment:

```
BRHVKTAATTAMBDVVD
---DHTATTTACBD---
```

Original motif

Consensus sequence: BRHVKTAATTAMBDVVD

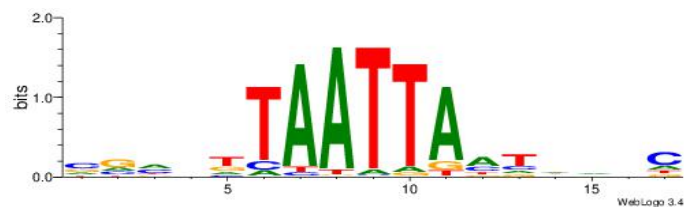Reverse complement motif

Consensus sequence: DBBDVYTAATTARBHKB

Motif ID: UP00164

Motif name: Hoxa7_2668.2

Species: Mus musculus

Matching format of first motif: Reverse Complement

Matching format of second motif: Original Motif

Direction: Forward

Position number: 4

Number of overlap: 11

Similarity score: 0.00942246

Alignment:

```
VVHDDTAATTAHTDDBC
---DHTATTTACBD---
```
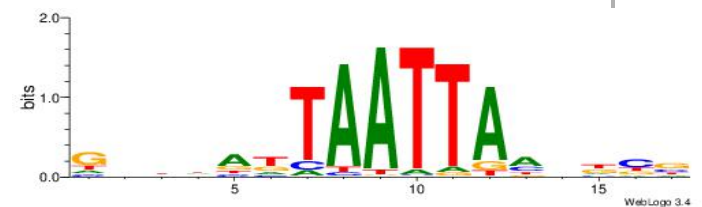
Original motif

Consensus sequence: VVHDDTAATTAHTDDBC

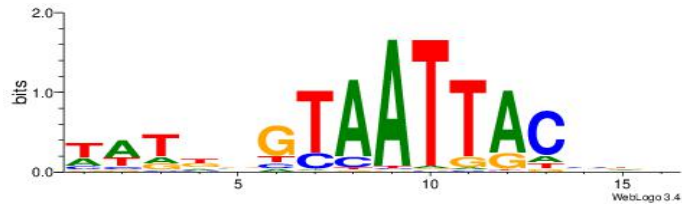Reverse complement motif

Consensus sequence: GBDDAHTAATTADHHVV

Motif ID: UP00259

Motif name: Hoxb6

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 2

Number of overlap: 11

Similarity score: 0.00949005

Alignment:

VDVGTAATTACBDAWW

-DBGTAAATAHD----

Original motif   Reverse complement motif

Consensus sequence: WWTDBGTAATTACVDB   Consensus sequence: VDVGTAATTACBDAWW

Motif ID: [UP00254](UP00254)

Motif name: Pou2f1

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

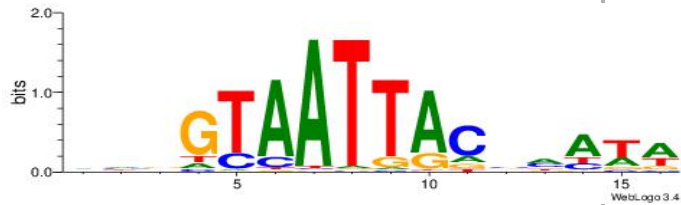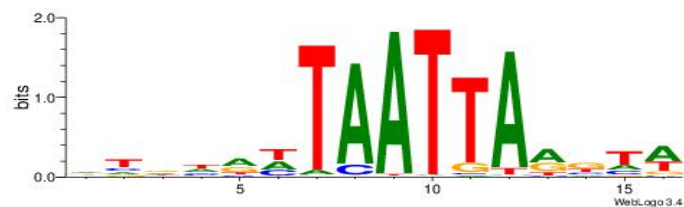Direction: Forward

Position number: 2

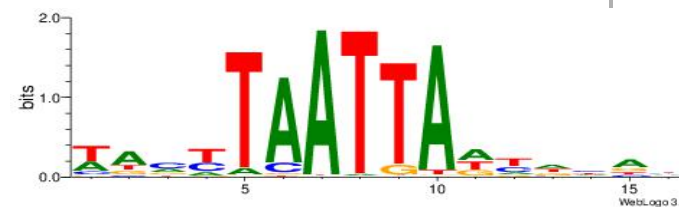Number of overlap: 11

Similarity score: 0.00998499

Alignment:

WABKTAATTAHKHHHD

-DBGTAAATAHD----

Original motif   Reverse complement motif

Consensus sequence: DHDHRHTAATTARBTW

Consensus sequence: WABKTAATTAHKHHHD

Motif ID: [UP00110](UP00110)

Motif name: Dlx4

Species: Mus musculus

Matching format of first motif: Original Motif

Matching format of second motif: Reverse Complement

Direction: Forward

Position number: 3

Number of overlap: 11
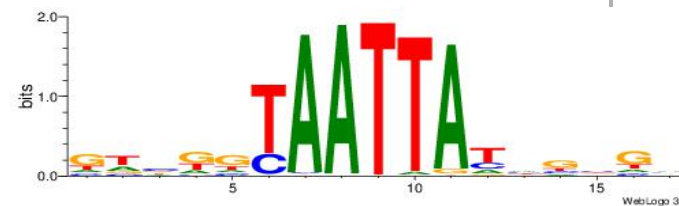
Similarity score: 0.0107458

Alignment:

```
GHVRGTAATTATDVVGV
--DBGTAAATAHD----
```

Original motif

Consensus sequence: BCVVDATAATTACMVHC
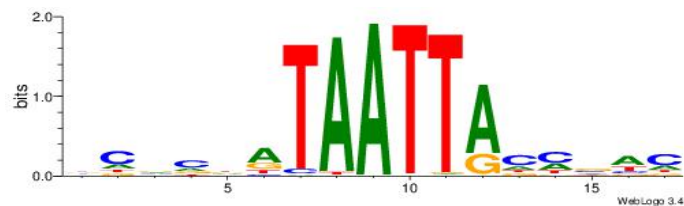
Reverse complement motif

Consensus sequence: GHVRGTAATTATDVVGV

Results created by MOTIFSIM on 11-20-2016 13:21:41
Runtime: 601.6 seconds

MOTIFSIM is written by Ngoc Tam L. Tran
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