## MOTIFSIM - MOTIF SIMilarity Detection Tool

## Version 2.2

## INPUT

```
Input Parameters
Number of files: 5
Number of top significant motifs: 5
Number of best matches: 5
Similarity cutoff >= 0.75
Matching motif database: UniProbe Homo Sapiens
Motif tree:
Yes
Combined similar motifs: Yes
Output file type: All
Output file format: PDF
Input files and motif counts
File name Count of motifs Dataset number
DREME_DM230.txt 1
MEME_DM230.txt 20 2
PScanChIP_DM230.txt 14 3
RSAT_peak-motifs_DM230.txt 10 4
W-ChIPMotifs_DM05.txt 11 5
```


## RESULTS

```
Top 5 Significant Motifs - Global Matching (Highest to Lowest)
Dataset #: 5 Motif ID: 46 Motif name: TFW3
```


## Original motif Consensus sequence: GCACTG



Reverse complement motif Consensus sequence: CAGTGC


## Best Matches for Top Significant Motif ID 46 (Highest to Lowest)

Dataset \#:
Motif ID:
Motif name:
Matching format of
Matching format of
Direction:
Position number:
Number of overlap:
Similarity score:
Alignment:
DBTACWGTAVH
----CAGTGC-

Dataset \#:
4
Motif ID:
Motif name:
Matching format of first motif:
Matching format of second motif:
Direction:
Position number:
43
wsTACwGTAsw
Reverse Complement
Reverse Complement
Backward
2
6
0.00773193

```
Alignment:
DBTACWGTAVH
----CAGTGC-
\begin{tabular}{|c|c|}
\hline  &  \\
\hline Dataset \#: 3 & \\
\hline Motif ID: 31 & \\
\hline Motif name: Pax5 & \\
\hline Matching format of first motif: Original Motif & \\
\hline Matching format of second motif: Original Motif & \\
\hline Direction: Forward & \\
\hline Position number: 4 & \\
\hline Number of overlap: 6 & \\
\hline Similarity score: 0.0111111 & \\
\hline \begin{tabular}{l}
Alignment: \\
DGVBCABTGDWGCGKRRCSR
\end{tabular} & \\
\hline Original motif Consensus sequence: DGVBCABTGDWGCGKRRCSR & Reverse complement motif Consensus sequence: MSGKKRCGCWDCABTGBBCD \\
\hline  & Cis \\
\hline Dataset \#: 3 & \\
\hline
\end{tabular}
```

Motif ID: 34
Motif name: Myc
Matching format of first motif: Reverse Complement
Matching format of second motif: Reverse Complement
Direction:
Backward
Position number: 2
Number of overlap: 6
Similarity score:
0.0148473
Alignment:
DCCACGTGCV
---CAGTGC-

```

Original motif Consensus sequence: VGCACGTGGH


Reverse complement motif Consensus sequence: DCCACGTGCV


\section*{Dataset \#:}

3
Motif ID:
35
Motif name:
Matching format of first motif:
Matching format of second motif:
Direction:
A
Original Motif
Reverse Complement
Backward
Position number: 2
Number of overlap: 6
Similarity score:
0.0156785

Alignment:
VVCACTTCCGG
----GCACTG-

Original motif Consensus sequence: CCGGAAGTGVV


Reverse complement motif Consensus sequence: VVCACTTCCGG

```

Dataset \#:
4
Motif ID:
Motif name:
Matching format of first motif:
Matching format of second motif:
Direction:
Position number:
Number of overlap:
Similarity score:
Alignment:
BCCGCCCCGCCCCBB
---GCACTG------

```
Original motif Consensus sequence: BCCGCCCCGCCCCBB

Reverse complement motif Consensus sequence: BBGGGGCGGGGCGGB


Original motif Consensus sequence: AATHATATWTHAAA


Reverse complement motif Consensus sequence: TTTDAWATATHAT C

\section*{Dataset \#:}

5
Motif ID:
Motif name:
Matching format of first motif:
Matching format of second motif:
Direction:
Position number:
Number of overlap:
Similarity score:
Alignment:
BTTHAAAAAAYAAAAAAR
---DBGTAAATAHD----

\section*{Original motif \\ Consensus sequence: KTTTITKTTTITTDAAB}


Reverse complement motif Consensus sequence: BTTHAAAAAAYAAAAAAR

```

Dataset \#: 2
Motif ID: 6
Motif name: Motif 6
Matching format of first motif: Original Motif
Matching format of second motif: Original Motif
Direction:
Backward
Position number: 1
Number of overlap: 11
Similarity score:
0.0205821
Alignment:
AATTYDGAARTAWW
---DBGTAAATAHD

```

Original motif Consensus sequence: AATTYDGAARTAWW


Reverse complement motif Consensus sequence: WWTAKTTCDKAA Ron

\section*{Dataset \#:}

5
Motif ID:
Motif name:
Matching format of first motif:
Matching format of second motif:
Direction:
Position number:
Number of overlap:

56
TFM13
Reverse Complement
Original Motif
Backward
3
11
```

Similarity score: 0.0258581
Alignment:
TTTTTTTKTTKTTTAATTHW
-------DHTATTTACBD--

```

Original motif Consensus sequence: TTITITTKTTKTTTAATTHW


Reverse complement motif Consensus sequence: WHAATTAAARAARAAAAAAA

```

| Dataset \#: | 2 |
| :--- | :--- |
| Motif ID: | 4 |
| Motif name: | Motif 4 |
| Matching format of first motif: | Original Motif |
| Matching format of second motif: | Reverse Complement |
| Direction: | Backward |
| Position number: | 1 |
| Number of overlap: | 11 |
| Similarity score: | 0.0288058 |

Alignment:
AWGKAAWTTTT
DBGTAAATAHD
Original motif Consensus sequence: AAAAWTTRCWT

| Original motif Consensus sequence: RAGKGMAGVRRGSRCASAGV | Reverse complement motif Consensus sequence: VCTSTGKSCMKBCTRCYCTK |
| :---: | :---: |
|  |  |
| Dataset \#: 3 |  |
| Motif ID: 31 |  |
| Motif name: Pax5 |  |
| Matching format of first motif: Reverse Complement |  |
| Matching format of second motif: Reverse Complement |  |
| Direction: Forward |  |
| Position number: 7 |  |
| Number of overlap: 14 |  |
| Similarity score: 0.0213256 |  |
| Alignment: |  |
| MSGKKRCGCWDCABTGBBCD |  |
| Original motif Consensus sequence: DGVBCABTGDWGCGKRRCSR | Reverse complement motif Consensus sequence: MSGKKRCGCWDCABTGBBCD |
|  |  |



```
Number of overlap:
14
Similarity score:
0.0316147
Alignment:
BTTHAAAAAAYAAAAAAR
----RGRAGARRGARRAR
```


## Original motif

Consensus sequence: KTTTITTKTTITTTDAAB


## Dataset \#:

Motif ID:
Motif name:
Matching format of first motif:
Matching format of second motif:
Direction:
Position number:
Number of overlap:
Similarity score:
Alignment:
WHAATTAAARAARAAAAAAA
---RGRAGARRGARRAR---

5
56
TFM13
Original Motif
Reverse Complement
Backward
4
14
0.0368869

Reverse complement motif Consensus sequence: BTTHAAAAAAYAAAAAAR




Dataset \#: 4
Motif ID: 38
Motif name: cccGCCCCGCCCCsb
Matching format of first motif: Original Motif
Matching format of second motif: Original Motif
Direction:
Backward
Position number: 2
Number of overlap: 10
Similarity score:
0.0127292

## Alignment:

BCCGCCCCGCCCCBB
----CCCCKCCCCC-

Original motif Consensus sequence: BCCGCCCCGCCCCBB


Reverse complement motif Consensus sequence: BBGGGGCGGGGCGGB


Dataset \#:
5
Motif ID:
Motif name:
Matching format of first motif:
Matching format of second motif:
Direction:

52
TFM2
Original Motif
Original Motif
Forward

| Position number: | 6 |  |
| :---: | :---: | :---: |
| Number of overlap: | 10 |  |
| Similarity score: | 0.0523047 |  |
| Alignment: |  |  |
| CHHCHBTCCTSCYTCTGC |  |  |
| -----CCCCKCCCCC--- |  |  |
| Original motif Consensus sequence: CHHCHBTCCTSCYTCTGC |  | Reverse complement motif Consensus sequence: GCAGAKGSAGGABDGHDG |
|  |  |  |
| Dataset \#: | 5 |  |
| Motif ID: | 55 |  |
| Motif name: | TFM12 |  |
| 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: | 0.0639596 |  |
| Alignment: |  |  |
| VCTSTGKSCMKBCTRCYCTK |  |  |
| ------CCCCKCCCCC---- |  |  |







Results created by MOTIFSIM on 06-24-2023 16:08:01
Runtime: 118.467 seconds
MOTIFSIM is written by Ngoc Tam L. Tran
Motif logo generated by weblogo

