



For further information on how to interpret these results please access <https://meme-suite.org/meme/doc/tomtom-output-format.html>.

To get a copy of the MEME software please access <https://meme-suite.org>.

If you use Tomtom in your research, please cite the following paper:

Shobhit Gupta, JA Stamatoyannopolous, Timothy Bailey and William Stafford Noble, "Quantifying similarity between motifs", *Genome Biology*, 8(2):R24, 2007. [\[full text\]](#)

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## QUERY MOTIFS

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Database	ID	Alt. ID	Preview	Matches	List
meme.xml	GCTGGGATTACAGGC	MEME-3		1	<a href="#">PITX2_HUMAN.H11MO.0.D</a>
meme.xml	GGGHGGCSGMGGSGG	MEME-2		25	<a href="#">TBX15_HUMAN.H11MO.0.D</a> , <a href="#">VEZF1_HUMAN.H11MO.0.C</a> , <a href="#">SP1_HUMAN.H11MO.1.A</a>
meme.xml	TTTTTCTTTTTTTT	MEME-1		13	<a href="#">CPEB1_HUMAN.H11MO.0.D</a> , <a href="#">PRDM6_HUMAN.H11MO.0.C</a> , <a href="#">FOXJ3_HUMAN.H11MO.0.A</a> , <a href="#">ANDR_HUMAN.H11MO.0.A</a>

## TARGET DATABASES

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Database	Used	Matched
HOCOMOCov11_full_HUMAN_mono_meme_format	769	39

## MATCHES TO TTTTCTTTTTTTT (MEME-1)

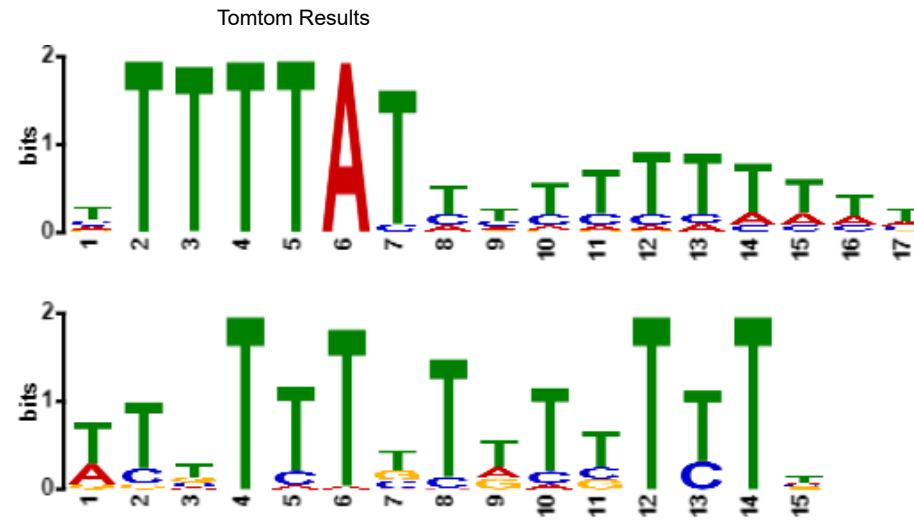
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Summary	Optimal Alignment

**Name** [CPEB1\\_HUMAN.H11MO.0.D](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.00e-07  
**E-value** 7.70e-05  
**q-value** 1.51e-04

**Overlap** 15  
**Offset** 0  
**Orientation** Normal

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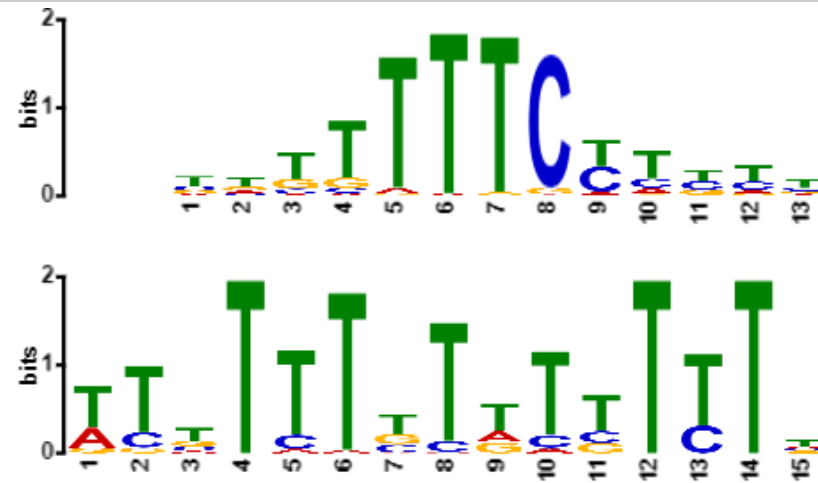
## Summary

**Name** [PRDM6\\_HUMAN.H11MO.0.C](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.82e-06  
**E-value** 1.40e-03  
**q-value** 1.37e-03

**Overlap** 13  
**Offset** -2  
**Orientation** Reverse Complement

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## Optimal Alignment

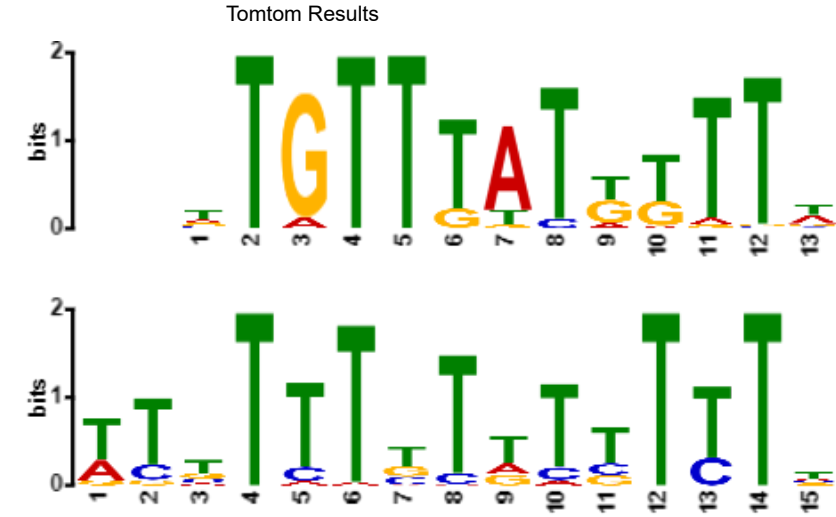


## Summary

## Optimal Alignment

**Name** [FOXJ3\\_HUMAN.H11MO.0.A](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 5.14e-05  
**E-value** 3.95e-02  
**q-value** 2.36e-02

**Overlap** 13  
**Offset** -2  
**Orientation** Normal  
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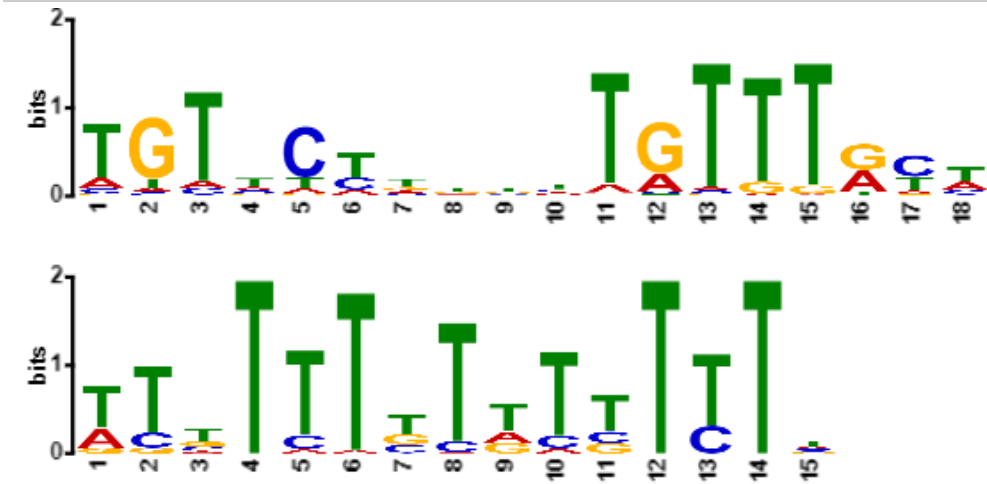


Summary

**Name** [ANDR\\_HUMAN.H11MO.0.A](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 6.25e-05  
**E-value** 4.81e-02  
**q-value** 2.36e-02

**Overlap** 15  
**Offset** 0  
**Orientation** Normal  
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Optimal Alignment



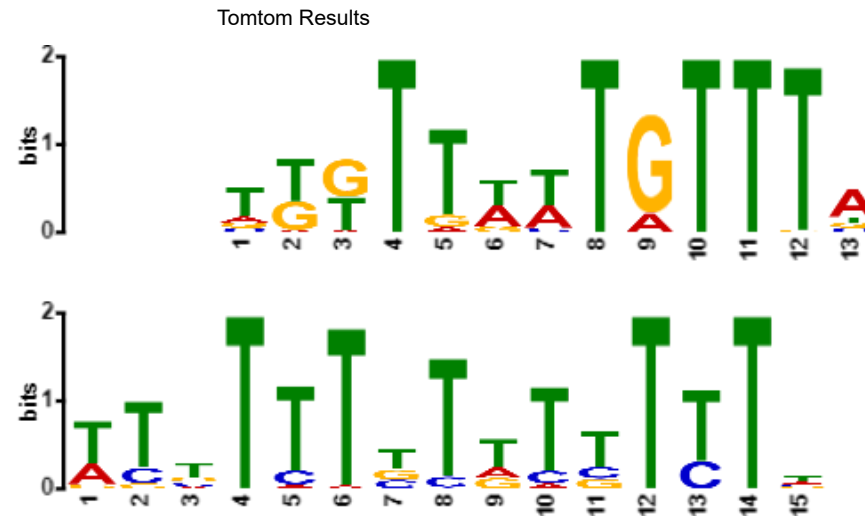
Summary

Optimal Alignment

**Name** [FOXJ3\\_HUMAN.H11MO.1.B](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.82e-04  
**E-value** 1.40e-01  
**q-value** 5.21e-02

**Overlap** 12  
**Offset** -3  
**Orientation** Normal

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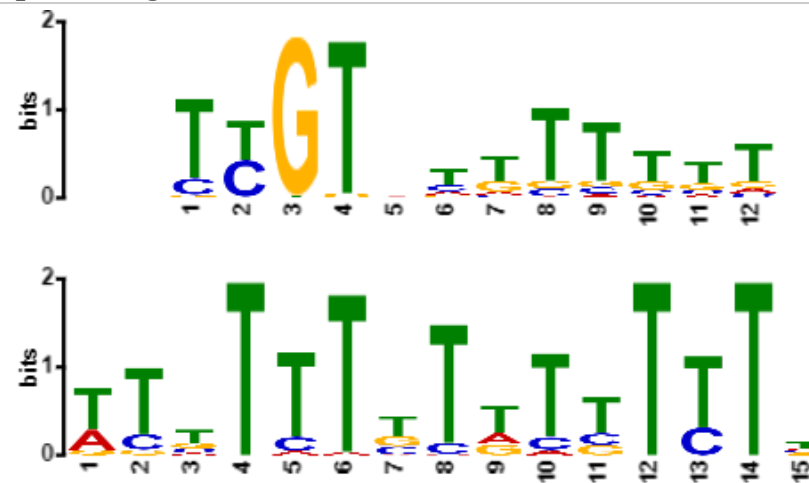
## Summary

**Name** [FUBP1\\_HUMAN.H11MO.0.D](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 2.55e-04  
**E-value** 1.96e-01  
**q-value** 5.21e-02

**Overlap** 12  
**Offset** -2  
**Orientation** Normal

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## Optimal Alignment

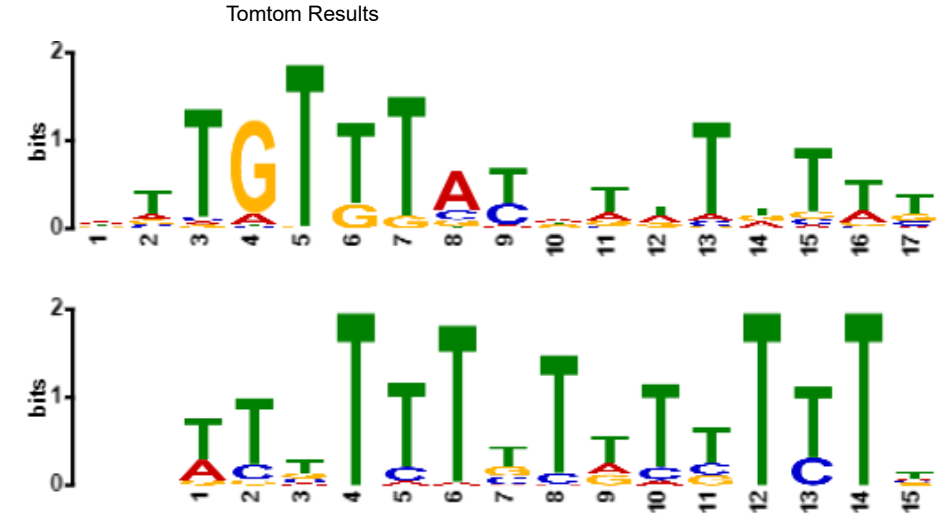


## Summary

## Optimal Alignment

**Name** [FOXG1\\_HUMAN.H11MO.0.D](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 2.68e-04  
**E-value** 2.06e-01  
**q-value** 5.21e-02

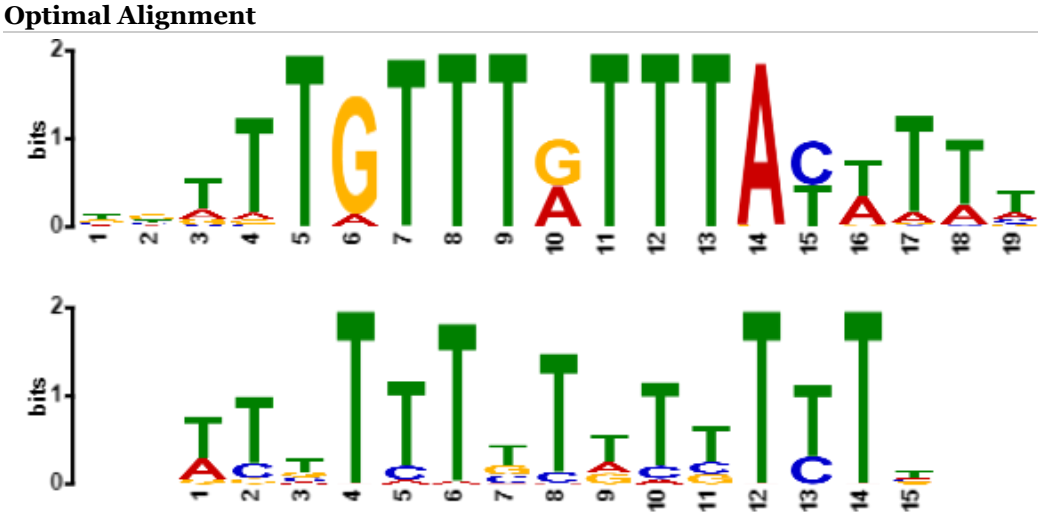
**Overlap** 15  
**Offset** 2  
**Orientation** Normal  
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Summary

**Name** [FOXL1\\_HUMAN.H11MO.0.D](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 3.06e-04  
**E-value** 2.35e-01  
**q-value** 5.21e-02

**Overlap** 15  
**Offset** 2  
**Orientation** Normal  
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Summary

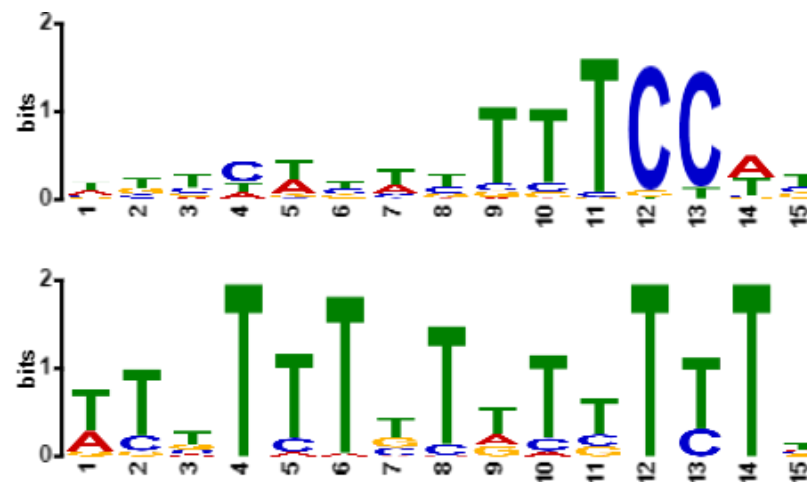
Optimal Alignment

**Name** [NFAC1\\_HUMAN.H11MO.0.B](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 3.11e-04  
**E-value** 2.39e-01  
**q-value** 5.21e-02

**Overlap** 15  
**Offset** 0  
**Orientation** Reverse Complement

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Tomtom Results



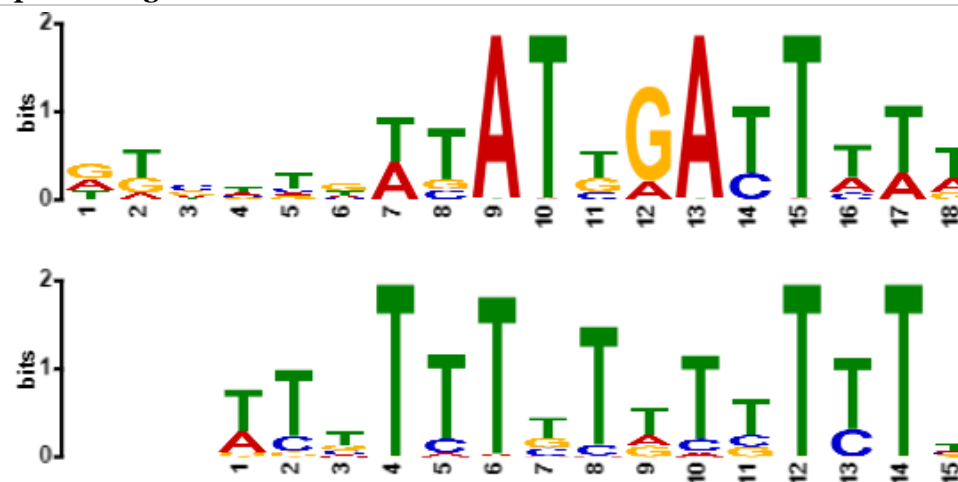
## Summary

**Name** [ONEC2\\_HUMAN.H11MO.0.D](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 7.63e-04  
**E-value** 5.87e-01  
**q-value** 1.12e-01

**Overlap** 15  
**Offset** 3  
**Orientation** Normal

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## Optimal Alignment

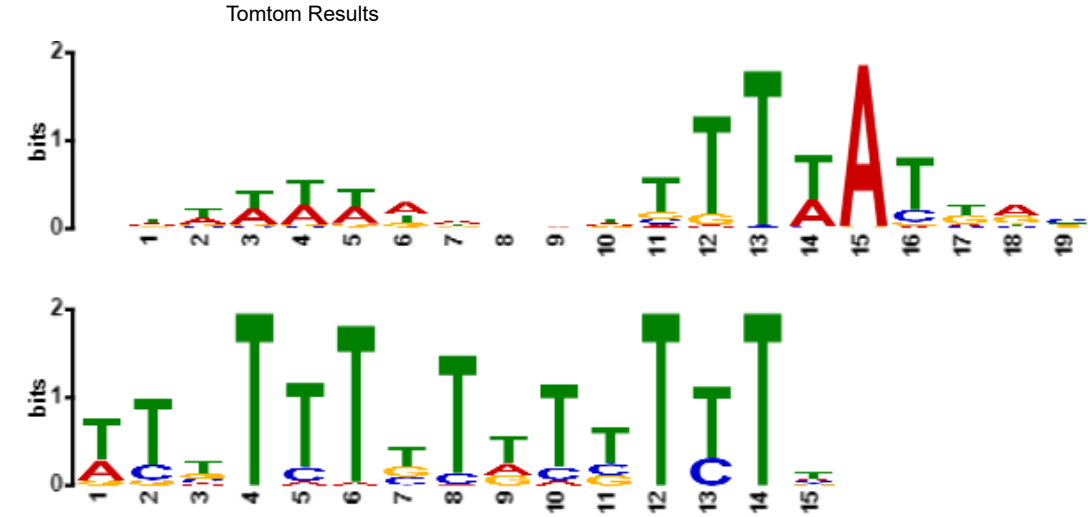


## Summary

## Optimal Alignment

Name	HXC10_HUMAN.H11MO.0.D
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	8.14e-04
E-value	6.26e-01
q-value	1.12e-01
Overlap	14
Offset	-1
Orientation	Normal

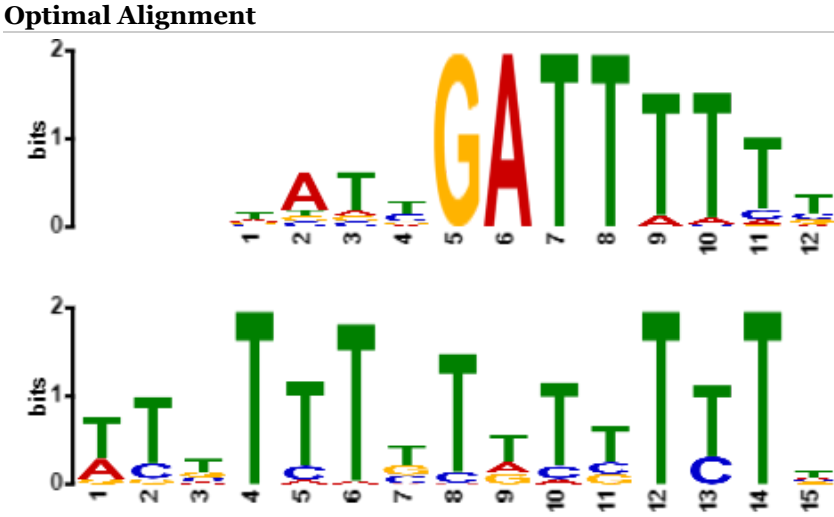
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Summary

Name	ONEC3_HUMAN.H11MO.0.D
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	9.79e-04
E-value	7.53e-01
q-value	1.23e-01
Overlap	12
Offset	-3
Orientation	Normal

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Summary

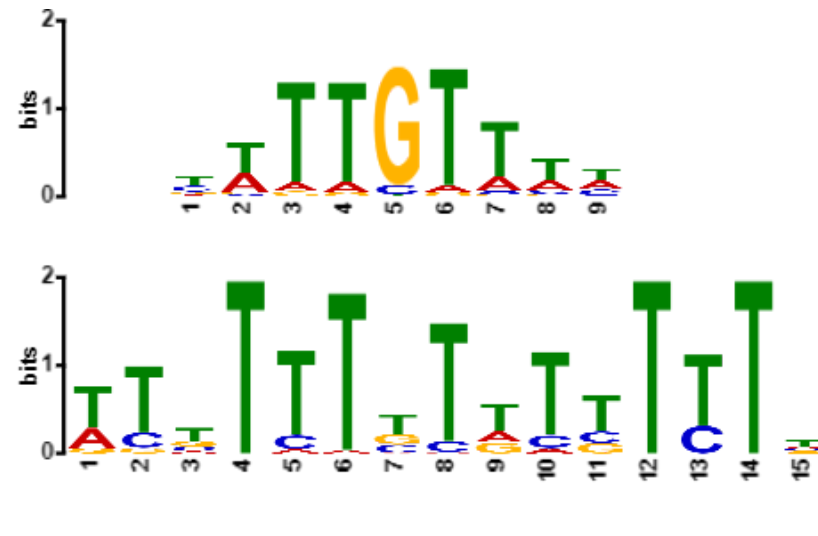
Optimal Alignment

**Name** [SRY\\_HUMAN.H11MO.0.B](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.10e-03  
**E-value** 8.47e-01  
**q-value** 1.28e-01

**Overlap** 9  
**Offset** -2  
**Orientation** Normal

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Tomtom Results



## MATCHES TO GGGHGGCSGMGGSGG (MEME-2)

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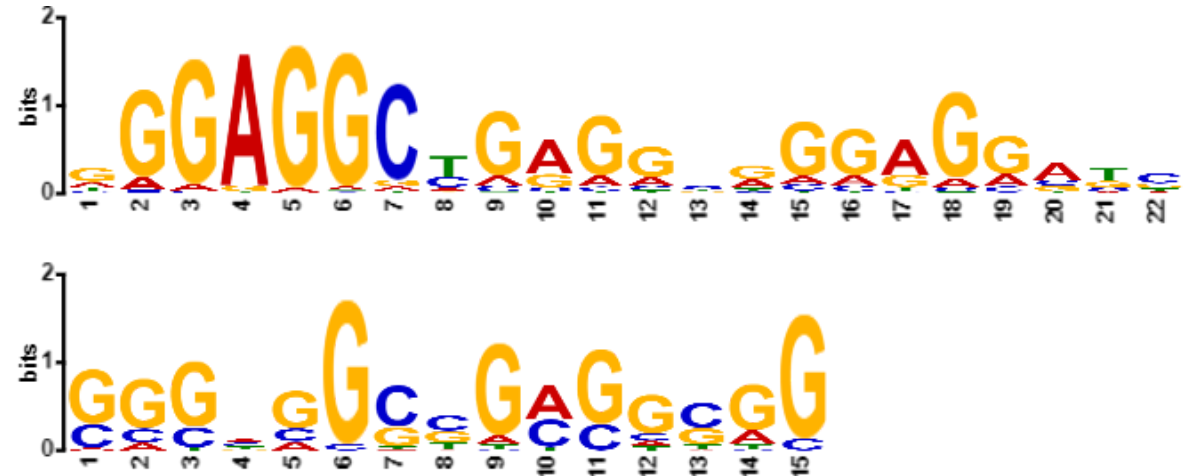
### Summary

**Name** [ZN770\\_HUMAN.H11MO.0.C](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 3.46e-08  
**E-value** 2.66e-05  
**q-value** 5.18e-05

**Overlap** 15  
**Offset** 0  
**Orientation** Normal

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### Optimal Alignment



### Summary

### Optimal Alignment



<b>Name</b>	<a href="#">PATZ1_HUMAN.H11MO.0.C</a>
<b>Database</b>	HOCOMOCov11_full_HUMAN_mono_meme_format
<b>p-value</b>	1.81e-06
<b>E-value</b>	1.39e-03
<b>q-value</b>	1.36e-03

<b>Overlap</b>	15
<b>Offset</b>	1
<b>Orientation</b>	Normal

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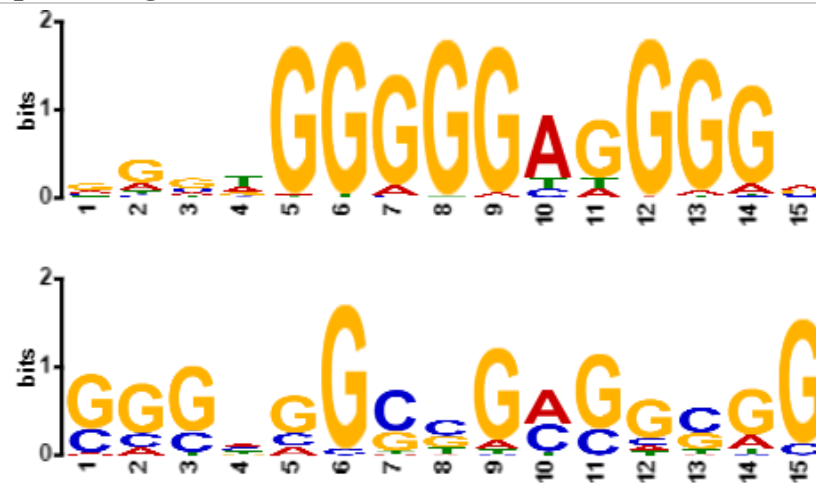
### Summary

<b>Name</b>	<a href="#">ZN281_HUMAN.H11MO.0.A</a>
<b>Database</b>	HOCOMOCov11_full_HUMAN_mono_meme_format
<b>p-value</b>	5.66e-06
<b>E-value</b>	4.35e-03
<b>q-value</b>	2.82e-03

<b>Overlap</b>	15
<b>Offset</b>	0
<b>Orientation</b>	Normal

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### Optimal Alignment



### Summary

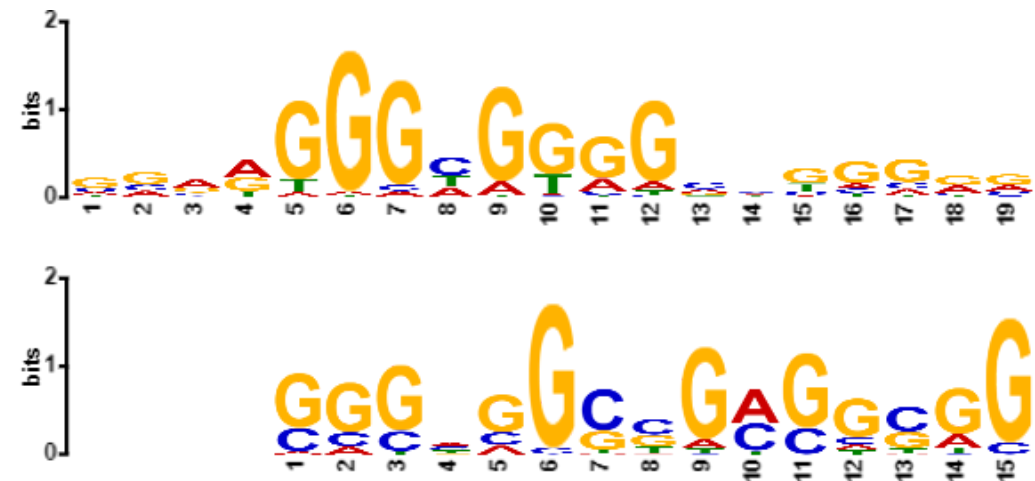
### Optimal Alignment

**Name** [KLF6\\_HUMAN.H11MO.0.A](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.52e-05  
**E-value** 1.17e-02  
**q-value** 5.31e-03

**Overlap** 15  
**Offset** 4  
**Orientation** Normal

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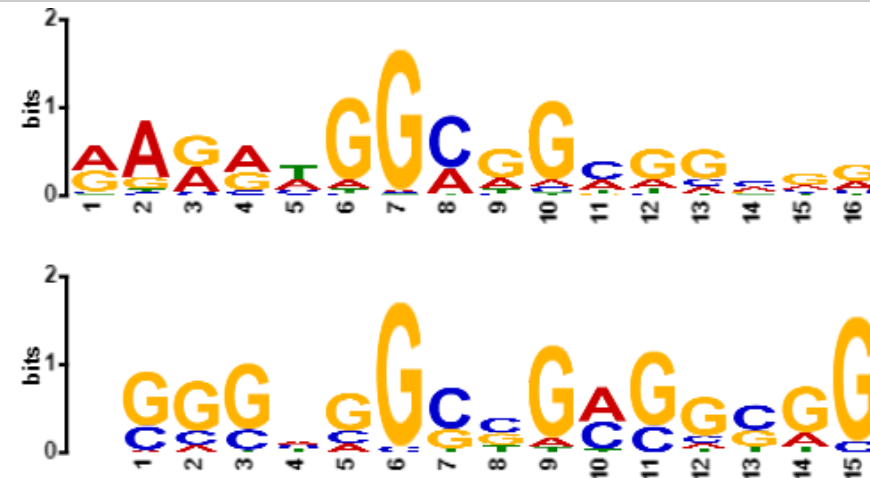
### Summary

**Name** [TAF1\\_HUMAN.H11MO.0.A](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.82e-05  
**E-value** 1.40e-02  
**q-value** 5.31e-03

**Overlap** 15  
**Offset** 1  
**Orientation** Normal

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### Optimal Alignment



### Summary

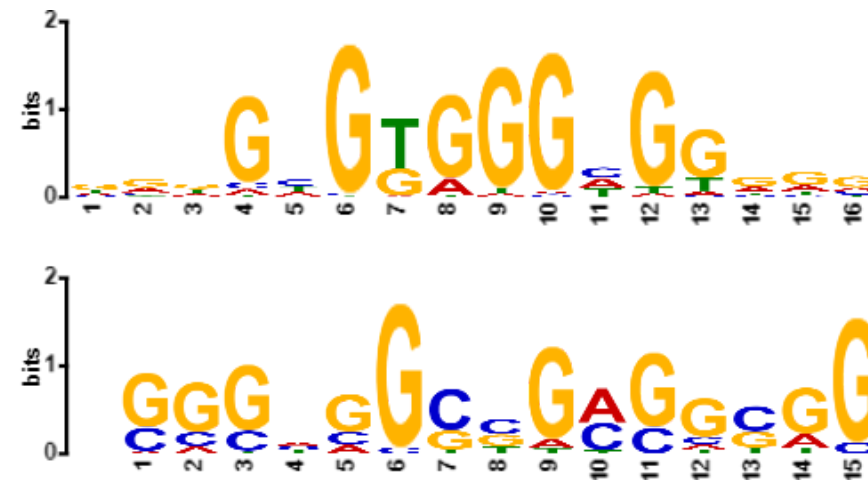
### Optimal Alignment

**Name** [EGR2\\_HUMAN.H11MO.1.A](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 2.13e-05  
**E-value** 1.64e-02  
**q-value** 5.31e-03

**Overlap** 15  
**Offset** 1  
**Orientation** Normal

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Tomtom Results



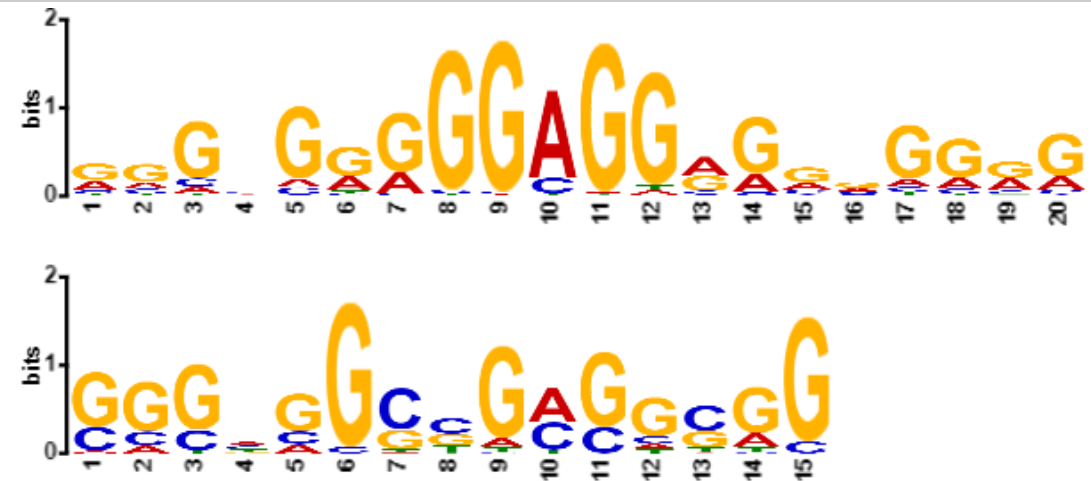
### Summary

**Name** [WT1\\_HUMAN.H11MO.0.C](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 2.93e-05  
**E-value** 2.25e-02  
**q-value** 6.26e-03

**Overlap** 15  
**Offset** 0  
**Orientation** Normal

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### Optimal Alignment



### Summary

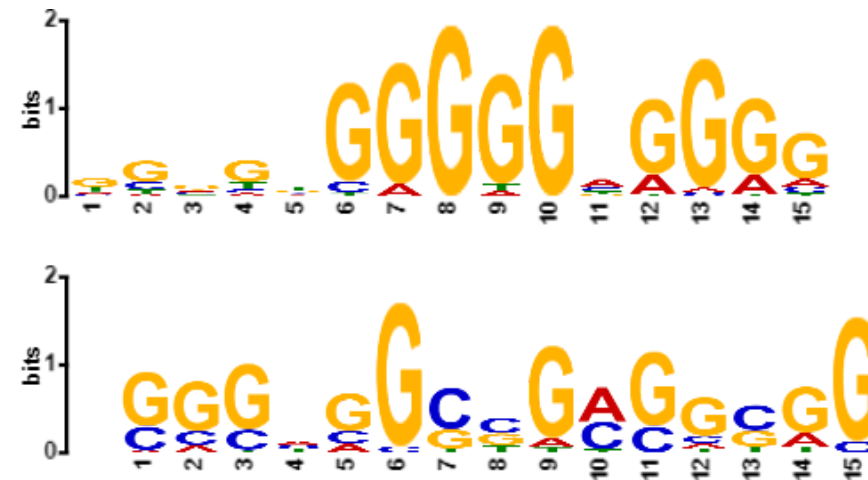
### Optimal Alignment

**Name** [ZN148\\_HUMAN.H11MO.0.D](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 4.18e-05  
**E-value** 3.22e-02  
**q-value** 7.82e-03

**Overlap** 14  
**Offset** 1  
**Orientation** Normal

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Tomtom Results



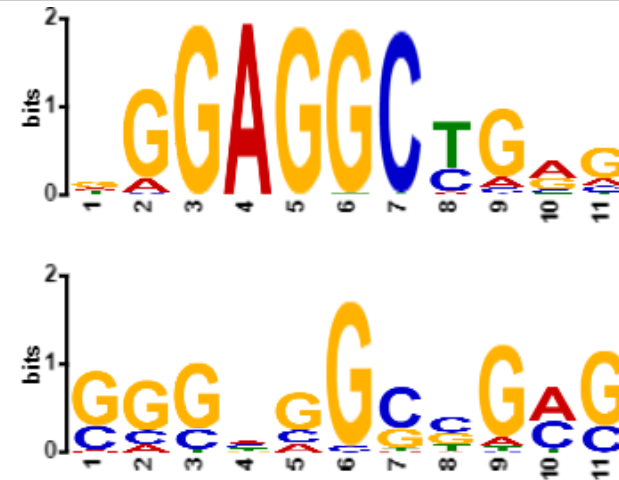
### Summary

**Name** [ZN770\\_HUMAN.H11MO.1.C](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 4.95e-05  
**E-value** 3.81e-02  
**q-value** 8.15e-03

**Overlap** 11  
**Offset** 0  
**Orientation** Normal

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### Optimal Alignment



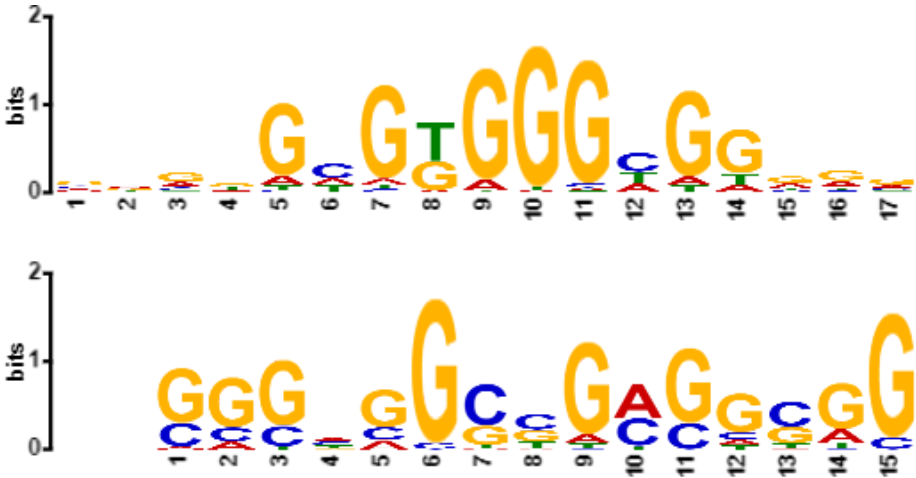
### Summary

### Optimal Alignment

Name	EGR1_HUMAN.H11MO.0.A
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	5.45e-05
E-value	4.19e-02
q-value	8.15e-03

Overlap	15
Offset	2
Orientation	Normal

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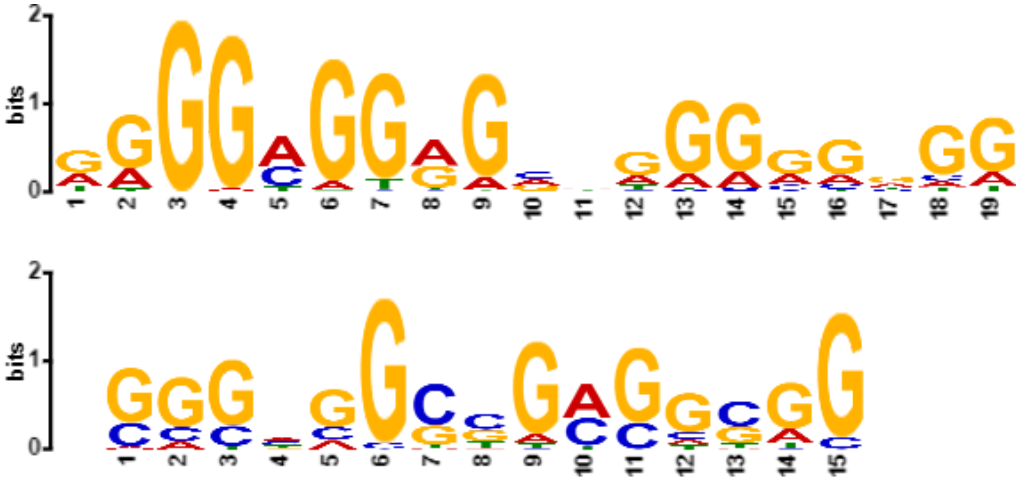
Summary

Name	KLF15_HUMAN.H11MO.0.A
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	9.11e-05
E-value	7.00e-02
q-value	1.20e-02

Overlap	15
Offset	1
Orientation	Normal

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Optimal Alignment



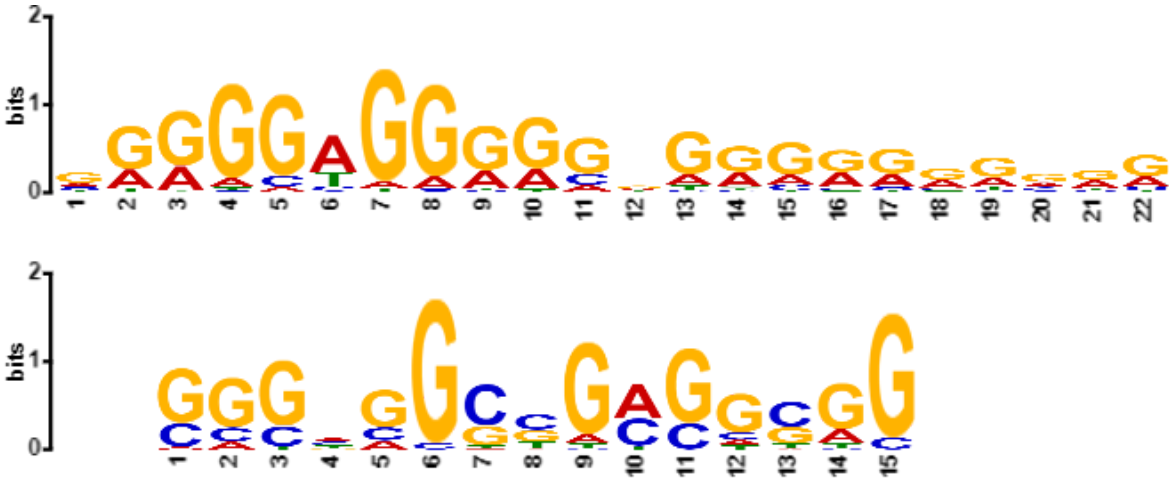
Summary

Optimal Alignment

Name	MAZ_HUMAN.H11MO.0.A
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	9.65e-05
E-value	7.42e-02
q-value	1.20e-02

Overlap	15
Offset	2
Orientation	Normal

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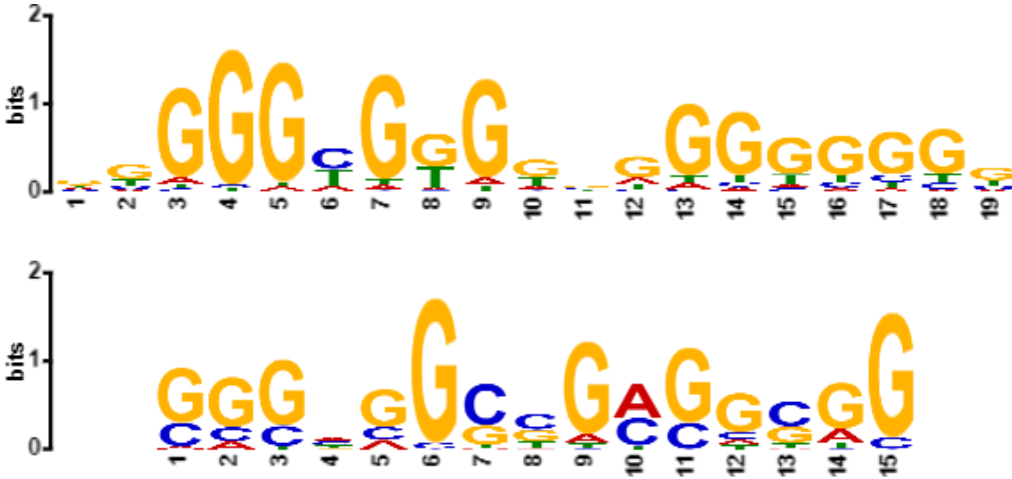
Summary

Name	KLF16_HUMAN.H11MO.0.D
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	1.05e-04
E-value	8.11e-02
q-value	1.21e-02

Overlap	15
Offset	2
Orientation	Normal

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Optimal Alignment



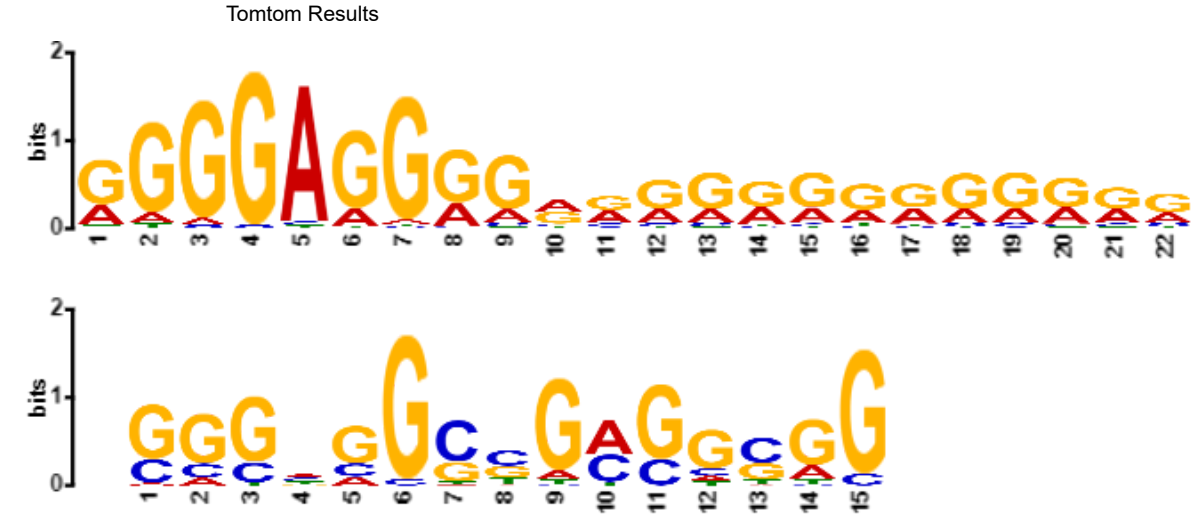
Summary

Optimal Alignment

Name	ZN467_HUMAN.H11MO.0.C
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	1.40e-04
E-value	1.07e-01
q-value	1.34e-02

Overlap	15
Offset	1
Orientation	Normal

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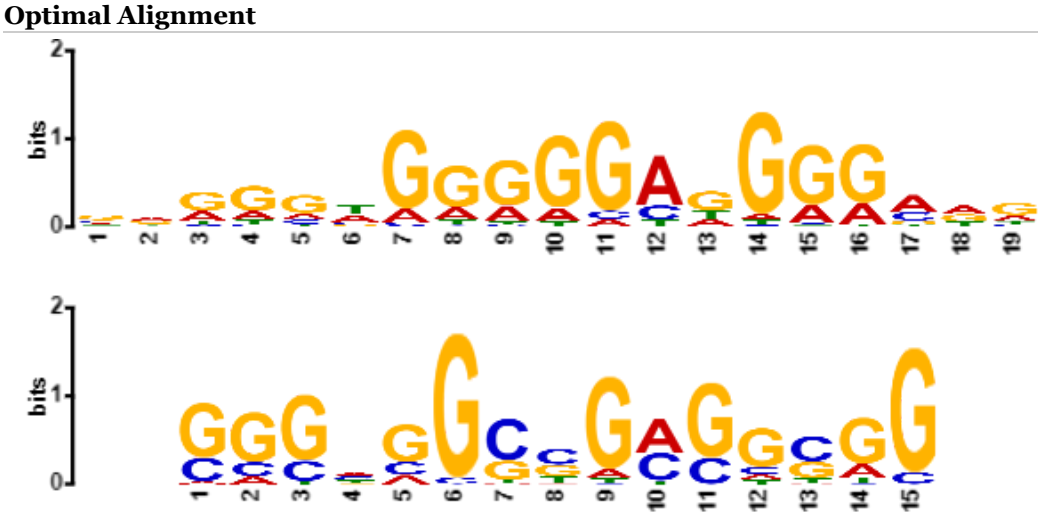


Summary

Name	ZBT17_HUMAN.H11MO.0.A
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	1.41e-04
E-value	1.08e-01
q-value	1.34e-02

Overlap	15
Offset	2
Orientation	Normal

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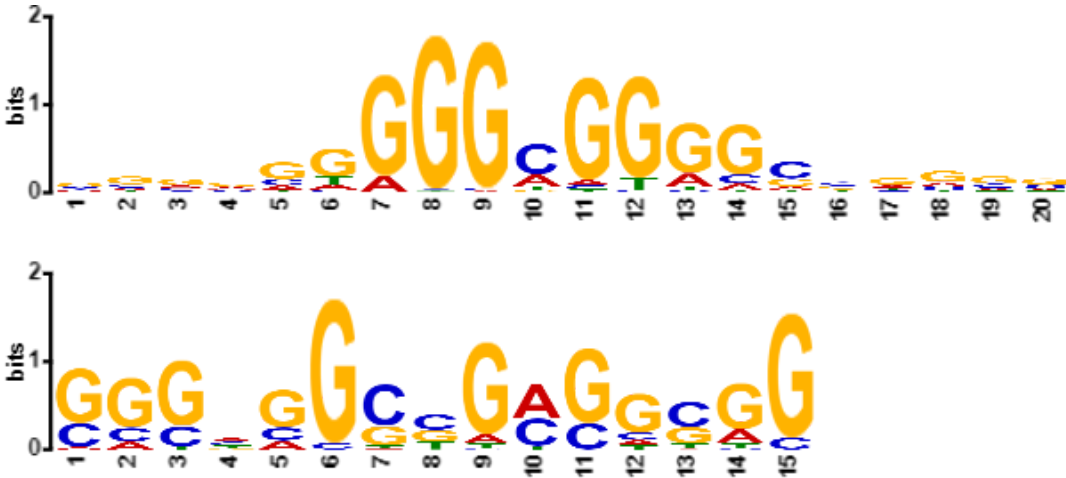
Summary

Optimal Alignment

**Name** [SP3\\_HUMAN.H11MO.0.B](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.43e-04  
**E-value** 1.10e-01  
**q-value** 1.34e-02

**Overlap** 15  
**Offset** 0  
**Orientation** Normal  
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Tomtom Results

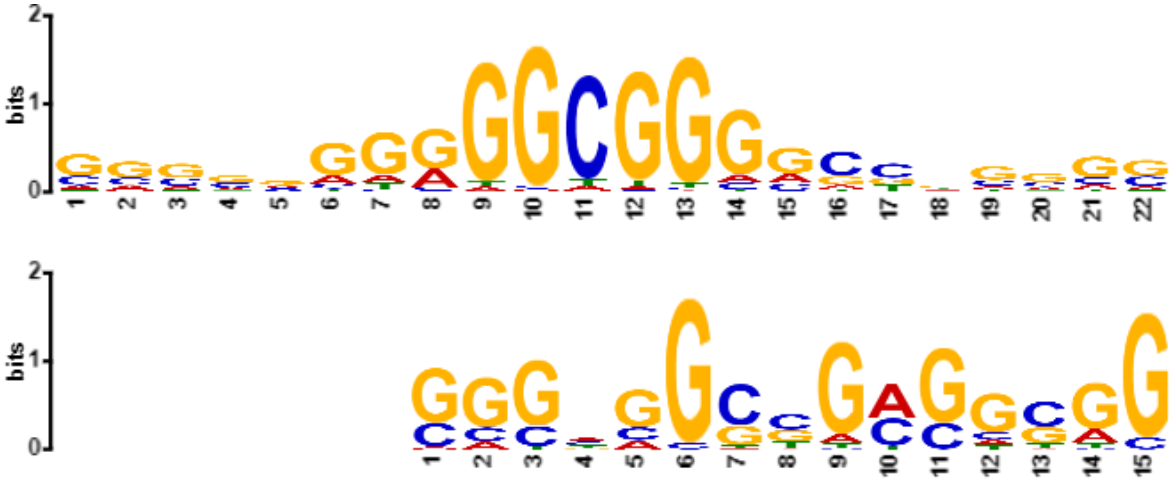


Summary

**Name** [SP2\\_HUMAN.H11MO.0.A](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.61e-04  
**E-value** 1.24e-01  
**q-value** 1.42e-02

**Overlap** 15  
**Offset** 7  
**Orientation** Normal  
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Optimal Alignment



Summary

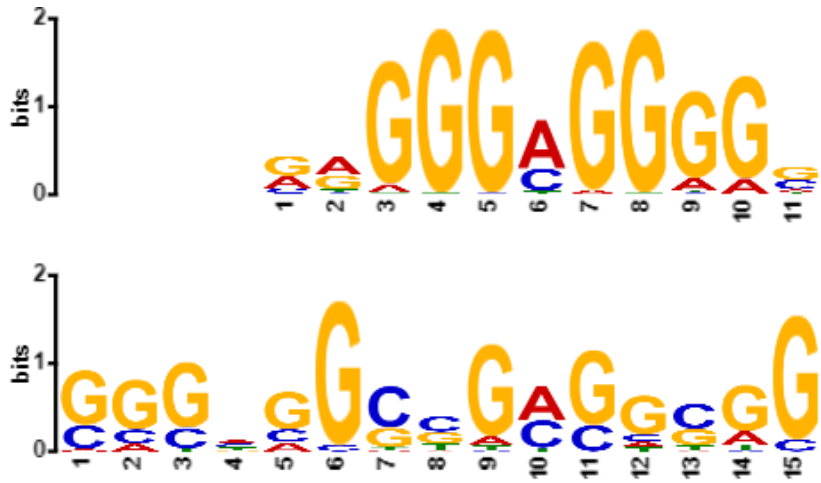
Optimal Alignment



Name	MAZ_HUMAN.H11MO.1.A
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	1.93e-04
E-value	1.49e-01
q-value	1.58e-02

Overlap	11
Offset	-4
Orientation	Normal

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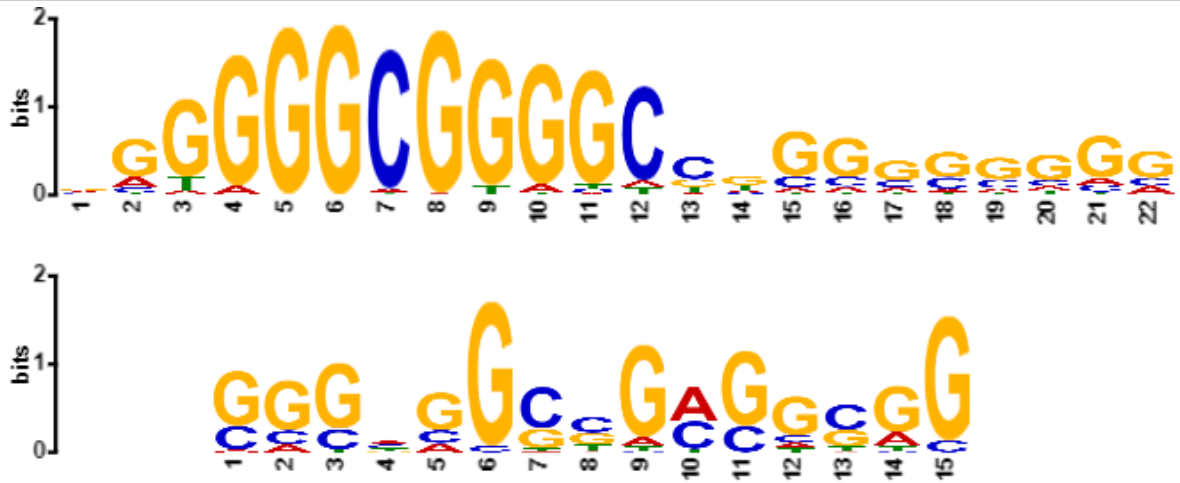
Summary

Name	SP1_HUMAN.H11MO.0.A
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	2.00e-04
E-value	1.54e-01
q-value	1.58e-02

Overlap	15
Offset	3
Orientation	Normal

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Optimal Alignment



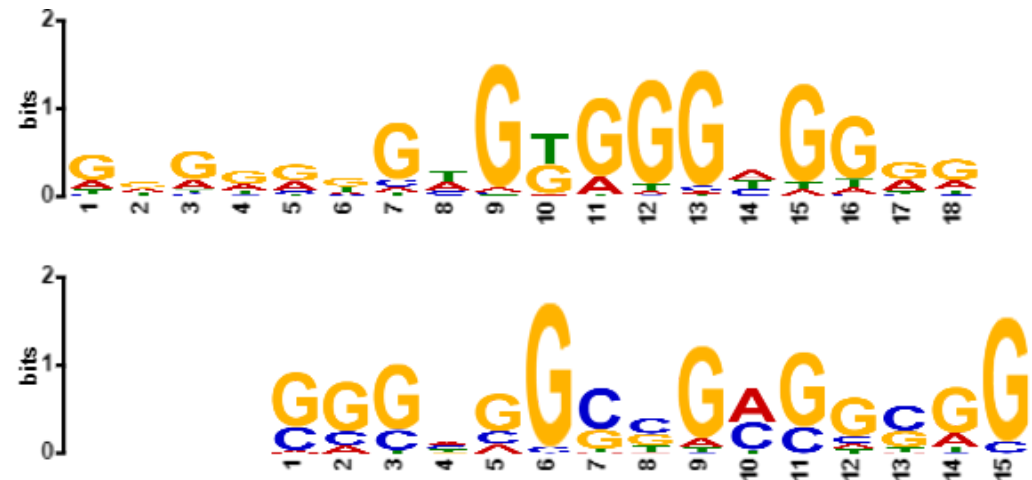
Summary

Optimal Alignment

**Name** [EGR2\\_HUMAN.H11MO.0.A](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 2.88e-04  
**E-value** 2.22e-01  
**q-value** 2.15e-02

**Overlap** 14  
**Offset** 4  
**Orientation** Normal

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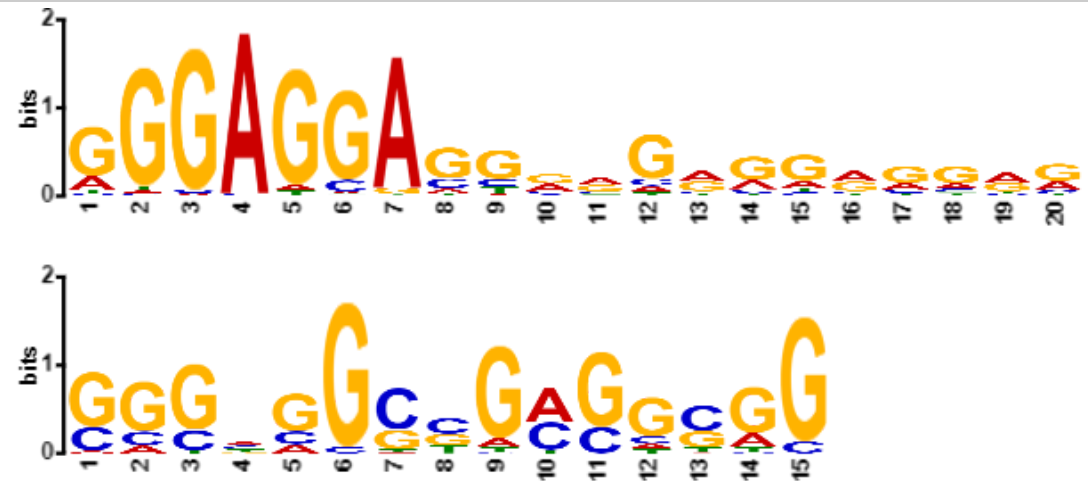
### Summary

**Name** [ZN263\\_HUMAN.H11MO.0.A](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 3.11e-04  
**E-value** 2.39e-01  
**q-value** 2.18e-02

**Overlap** 15  
**Offset** 0  
**Orientation** Normal

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### Optimal Alignment



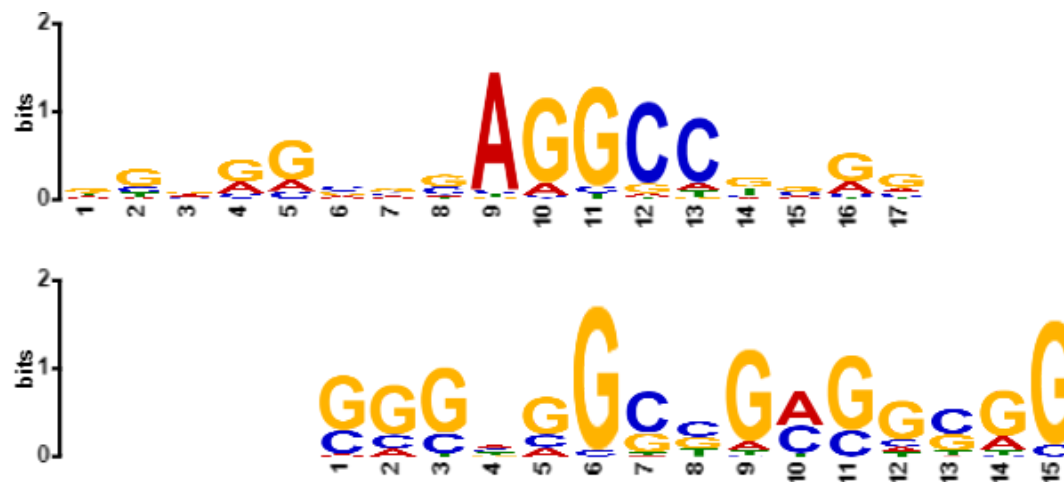
### Summary

### Optimal Alignment

<b>Name</b>	<a href="#">ZFX_HUMAN.H11MO.1.A</a>
<b>Database</b>	HOCOMOCov11_full_HUMAN_mono_meme_format
<b>p-value</b>	3.21e-04
<b>E-value</b>	2.47e-01
<b>q-value</b>	2.18e-02

**Overlap** 12  
**Offset** 5  
**Orientation** Normal

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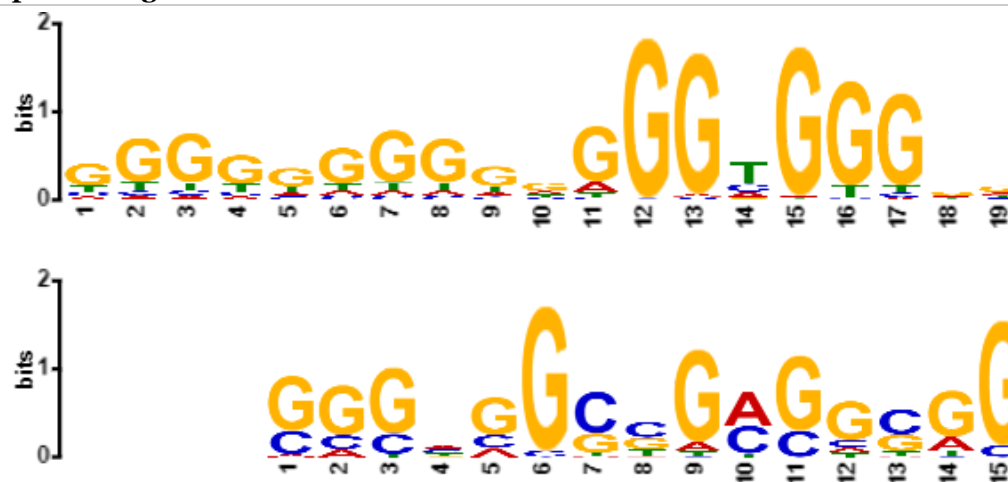
### Summary

<b>Name</b>	<a href="#">TBX15_HUMAN.H11MO.0.D</a>
<b>Database</b>	HOCOMOCov11_full_HUMAN_mono_meme_format
<b>p-value</b>	3.98e-04
<b>E-value</b>	3.06e-01
<b>q-value</b>	2.59e-02

**Overlap** 15  
**Offset** 4  
**Orientation** Normal

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### Optimal Alignment



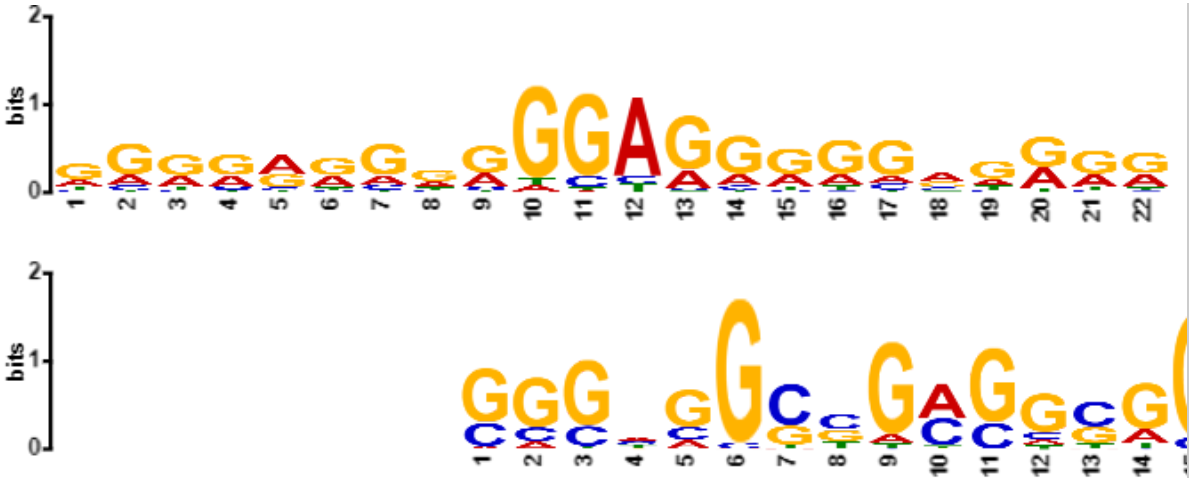
### Summary

### Optimal Alignment

Name	VEZF1_HUMAN.H11MO.0.C
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	5.63e-04
E-value	4.33e-01
q-value	3.51e-02

Overlap	14
Offset	8
Orientation	Normal

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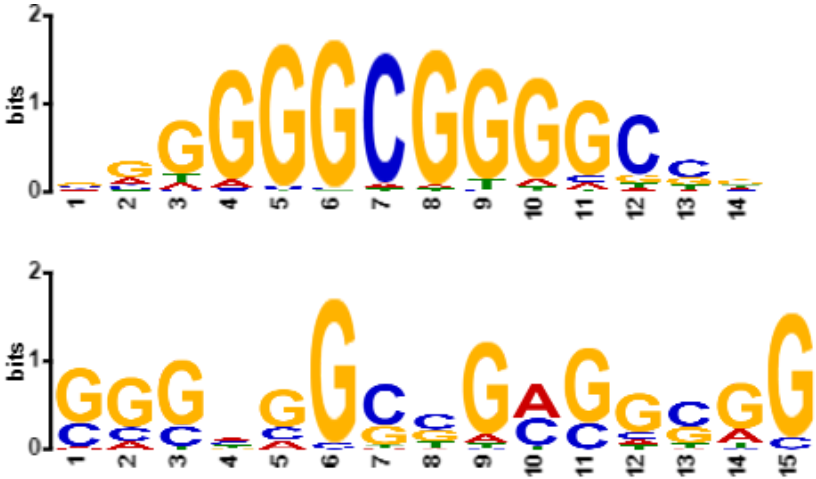
Summary

Name	SP1_HUMAN.H11MO.1.A
Database	HOCOMOCov11_full_HUMAN_mono_meme_format
p-value	7.75e-04
E-value	5.96e-01
q-value	4.64e-02

Overlap	14
Offset	0
Orientation	Normal

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Optimal Alignment



MATCHES TO GCTGGGATTACAGGC (MEME-3)

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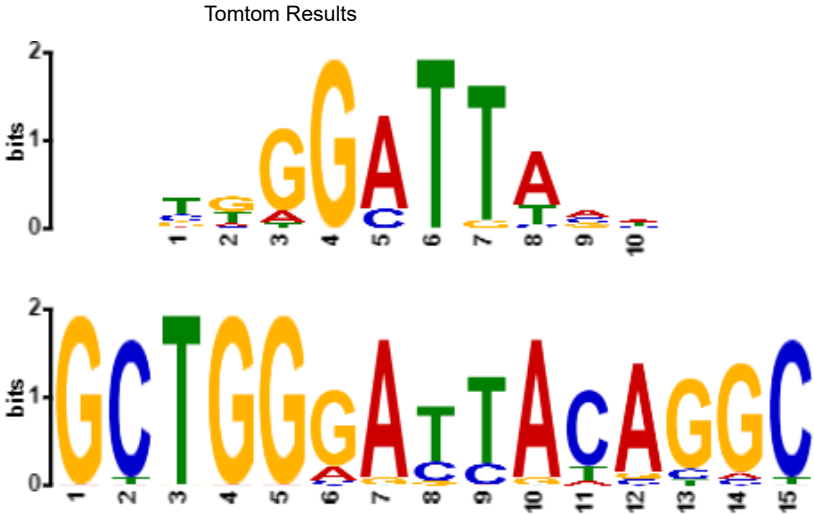
Summary

Optimal Alignment

**Name** [PITX2\\_HUMAN.H11MO.0.D](#)  
**Database** HOCOMOCov11\_full\_HUMAN\_mono\_meme\_format  
**p-value** 1.10e-04  
**E-value** 8.47e-02  
**q-value** 1.69e-01

**Overlap** 10  
**Offset** -2  
**Orientation** Normal

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SETTINGS

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Alphabet

**Source:** the query file

Name	Bg.				Bg.	Name
Adenine	0.267	A	~	T	0.267	Thymine
Cytosine	0.233	C	~	G	0.233	Guanine

Other Settings

<b>Strand Handling</b>	Motifs may be reverse complemented before comparison to find a better match.
<b>Distance Measure</b>	Pearson correlation coefficient
<b>Match Threshold</b>	Matches must have a <i>E</i> -value of 1 or smaller.

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**Tomtom version**  
5.5.1 (Release date: Sun Jan 29 10:33:12 2023 -0800)

**Reference**  
Shobhit Gupta, JA Stamatoyannopolous, Timothy Bailey and William Stafford Noble, "Quantifying similarity between motifs", *Genome Biology*, 8(2):R24, 2007. [\[full text\]](#)

Command line

```
tomtom -verbosity 1 -oc meme_tomtom_out -min-overlap 5 -dist pearson -evaluate -thresh 1 -no-ssc meme_out/meme.xml
```

Result calculation took 4.397 seconds

