

Supplemental Table S6: Potential transcription factors and their target genes.

logo	geneSet	motif	NES	AUC	TF.highConf	nEnrGenes	enrichedGenes
	Lipid-glycosylation	cisbp.M0181: Lipid-glycosylation	4.68	0.2880	CREBZF (inferredBy.Ort)	4	PIGV; PIGZ; UGCG; UGT8
	Lipid-glycosylation	metacluster.171.1	4.58	0.2830	HSFY1; HSFY2; TEAD1; TEAD1; TEAD3 (directAnnotation).	7	A4GALT; B3GNT5; B4GALT5; B4GALT6; PIGM; PIGZ; UGT8
	Lipid-glycosylation	transfac.pro.M00322	4.41	0.2750	MAX; MYC (directAnnotation).	5	B3GALNT1; B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation	transfac.pro.M05432	4.20	0.2640	ZSCAN18 (directAnnotation).	7	B3GALNT1; B3GNT5; B4GALT5; B4GALT6; PIGV; UGCG; UGT8

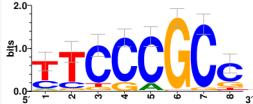
	Lipid-glycosylation	metacluster.15.2	4.16	0.2620	E2F1; E2F1;	5	B3GNT5; B4GALT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation	cisbp.M08186	4.10	0.2590	BACH1 (directAnnotation).	5	B3GALNT1; B3GNT5; B4GALNT1; PIGV; UGT8
	Lipid-glycosylation	hocomoco.ZF_HU-MAN.H11M<	4.04	0.2560	ZBTB14 (directAnnotation).	10	A4GALT; B3GALNT1; B3GNT5; B4GALNT1; B4GALT6; PIGA; PIGM; PIGZ; UGCG; UGT8

	Lipid-glycosylation metacluster. 198.5	4.02	0.2550	TCFL5; TCFL5 (directAnnotation).	3	B3GALNT1; UGCG; UGT8
	Lipid-glycosylation taipale. tf. pairs.HES1. GN-CACGT-GNC. HT	4.00	0.2540	HES1 (directAnnotation).	4	B3GALNT1; B4GALT6; UGCG; UGT8
	Lipid-glycosylation cisbp.M00775	3.95	0.2510	ZBTB1 (inferredBy.Orthology).	4	B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation metacluster. 67.2	3.94	0.2510	ZNF501 (directAnnotation). ACAA1; E2F2; E2F2; E2F3; E2F3; FOXN4 (inferredBy.Orthology).	4	B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation homer.GGC GGQAARN2500 E2F6	3.90	0.2490	E2F6 (directAnnotation).	5	B3GNT5; B4GALT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation transfac. pro.M04866	3.90	0.2490	HDAC2 (directAnnotation).	4	B3GALNT1; B4GALT6; UGCG; UGT8

	Lipid-glycosylation	hdpi.NRL	3.81	0.2440	NRL (directAnnotation).	4	B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation	jaspar.MA11	3.78	0.2430	TFDP1 (directAnnotation).	10	B3GALNT1; B3GNT5; B4GALNT1; B4GALT5; B4GALT6; PIGM; PIGV; PIGZ; UGCG; UGT8
	Lipid-glycosylation	transfac. pro.M05505	3.76	0.2420	ZNF2 (inferredBy.Orthology).	4	B4GALT6; PIGA; PIGV; UGCG
	Lipid-glycosylation	jaspar.MA16	3.76	0.2420	ZBTB14 (directAnnotation).	5	B3GALNT1; B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation	transfac. pro.M08005	3.75	0.2410	TCFL5 (inferredBy.Orthology).	5	B3GALNT1; B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation	hdpi.TGIF1	3.72	0.2390	TGIF1 (directAnnotation).	5	B3GALNT1; B3GNT5; B4GALT6; UGCG; UGT8

	Lipid-glycosylation transfac. glycosylation pro.M00938	3.71	0.2390	E2F1 (directAnnotation).	4	B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation metacluster. 135.11	3.65	0.2360	NR2C2 (directAnnotation).	4	B3GNT5; B4GALT5; B4GALT6; UGCG
	Lipid-glycosylation transfac. glycosylation pro.M00333	3.63	0.2350	ZBTB14 (directAnnotation).	3	B4GALT6; UGCG; UGT8
	Lipid-glycosylation transfac. glycosylation pro.M00803	3.61	0.2340	E2F1; E2F3; E2F4; TFDP1 (directAnnotation).	7	B3GALNT1; B3GNT5; B4GALNT1; B4GALT6; PIGZ; UGCG; UGT8
	Lipid-glycosylation transfac. glycosylation pro.M02089	3.60	0.2340	E2F3 (directAnnotation).	8	B3GALNT1; B3GNT5; B4GALNT1; B4GALT5; B4GALT6; PIGZ; UGCG; UGT8
	Lipid-glycosylation transfac. glycosylation pro.M00430	3.54	0.2310	E2F1 (directAnnotation).	4	B3GNT5; B4GALT6; UGCG; UGT8

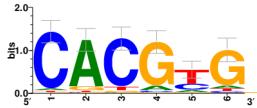
	Lipid-glycosylation	transfac. glycosylation pro.M06126	3.50	0.2290	ZNF43 (directAnnotation).	5	A4GALT; B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation	swissregulon.	3.45	0.2260	ZBTB14 (directAnnotation).	5	B3GALNT1; B4GALT6; PIGA; UGCG; UGT8
	Lipid-glycosylation	taipale. tf. pairs.ELK1. HOXA3. NCCGG- WNNNNNNNNNNNNCAT- TAN. CAP. repr	3.44	0.2260	ELK1; HOXA3 (directAnnotation).	4	A4GALT; B3GALNT1; PIGM; PIGZ
	Lipid-glycosylation	transfac. glycosylation pro.M06059	3.44	0.2250	ZNF727 (directAnnotation).	4	A4GALT; B4GALT5; PIGA; PIGZ
	Lipid-glycosylation	dbtfbs.ZBED53.43 HepG2. ENCSR656SIB. merged. N1	0.2250	0.2250	ZBED5 (directAnnotation).	4	B3GNT5; B4GALT5; PIGA; UGCG



Lipid-glycosylation 15.1

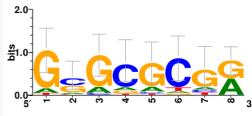
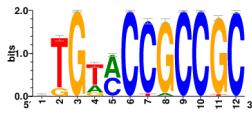
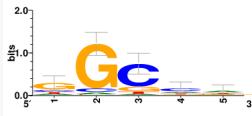
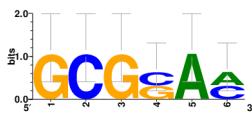
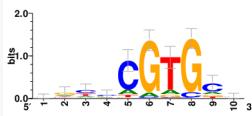
metacluster. 3.41 0.2240 E2F4;  
E2F4;  
E2F4;  
E2F4;  
E2F4;  
E2F7;  
ZFP69B  
(directAn-  
notation).  
E2F4 (in-  
ferredBy.Ort

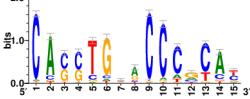
8 B3GALNT1;  
B3GNT5;  
B4GALT5;  
B4GALT6;  
PIGM;  
PIGV;  
UGCG;  
UGT8

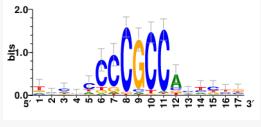
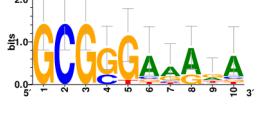
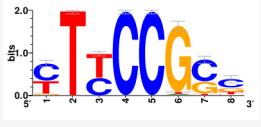
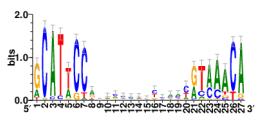


Lipid-glycosylation metacluster. 3.39 0.2230 5 B3GALNT1; B3GNT5; B4GALT6; UGCG; UGT8

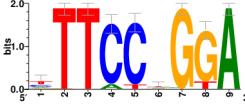
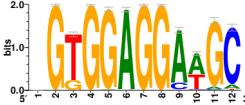
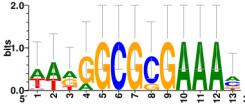
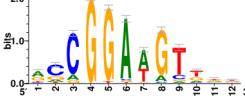
metacluster. 3.39 0.2230 BHLHE40; HES1; HES1; HES1; HES1; HES1; HES1; HES2; HES5; HES5; HES7; HES7; HEY1; HEY1; HEY1; HEY1; HEY1; HEY1; HEY1; HEY2; HEY2; HEY2; HEY2; HEY2; HEY2; HEY2; HEY2; HIF1A; MGA; MYC; MYCN; SOHLH2 (directAnnotation). BHLHE40; BHLHE40; BHLHE40; BHLHE41; BHLHE41; HELT; HELT; HES1; HES1; HES1; HES2; HES2; HES3; HES3; HES4; HES4; HES5; HES5; HES5; HES5; HES5; HES5; HES5; HES5; HES5; HES5;

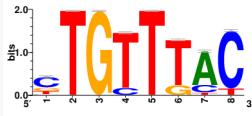
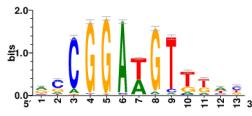
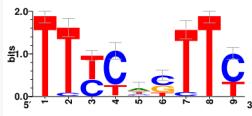
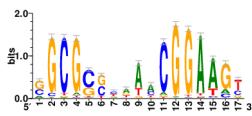
	Lipid-glycosylation transfac. pro.M00716	3.39	0.2230	ZBTB14 (directAnnotation).	8	B3GALNT1; B3GNT5; B4GALNT1; B4GALT5; B4GALT6; PIGZ; UGCG; UGT8
	Lipid-glycosylation transfac. pro.M06163	3.39	0.2230	ZNF121 (directAnnotation).	4	A4GALT; B3GNT5; B4GALT6; PIGZ
	Lipid-glycosylation metacluster. 45.4	3.35	0.2210	E2F2 (directAnnotation).	5	B3GALNT1; B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation hdpi.HTATIP23.35	3.35	0.2210	HTATIP2 (directAnnotation).	3	B4GALT6; UGCG; UGT8
	Lipid-glycosylation cisbp.M0173	3.34	0.2200	CCDC169- SOHLH2; SOHLH2 (inferredBy.Ort)	5	B3GALNT1; B3GNT5; B4GALT6; UGCG; UGT8

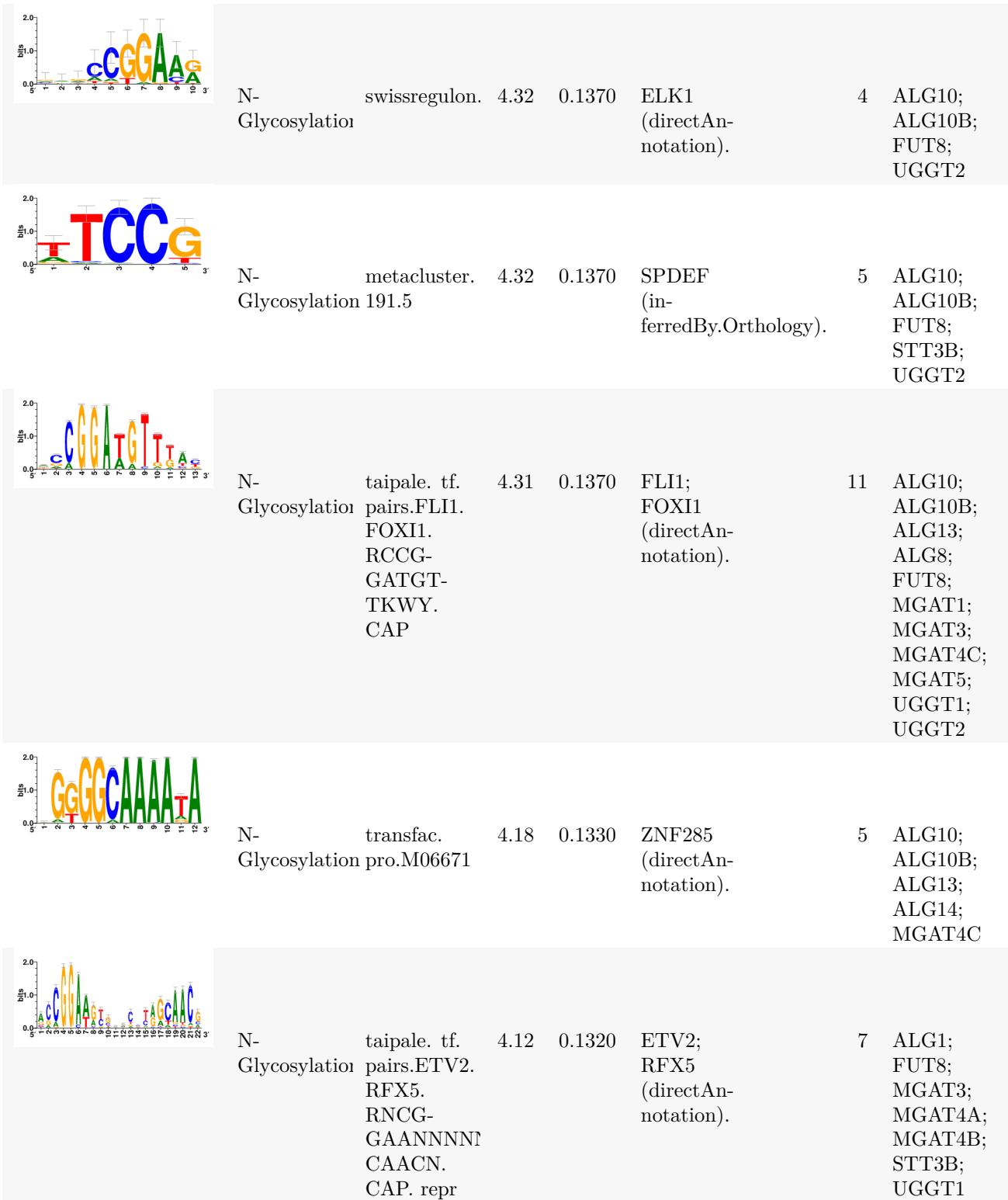
	Lipid-glycosylation metacluster. 198.2	metacluster.	3.29	0.2180	AHR; AHR; ARNT; BHLHE40; MAX; MYC; ZNF780A (directAn- notation). MTF1 (in- ferredBy.Orthology).	4	B3GALNT1; B4GALT6; UGCG; UGT8
	Lipid-glycosylation transfac. pro.M07051	transfac.	3.29	0.2180	NFIB (directAn- notation).	4	B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation	hocomoco.FEV3.28 HU- MAN.H11MO.0.B	0.2180	FEV (directAn- notation).	5	B3GNT5; B4GALT5; B4GALT6; UGCG; UGT8	
	Lipid-glycosylation	taipale. tf. pairs.GCM1.	3.27	0.2170	FIGLA; GCM1 (directAn- notation).	4	B4GALT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation	cisbp.M07938	3.23	0.2150	E2F1 (directAn- notation).	9	B3GALNT1; B3GNT5; B4GALNT1; B4GALT5; B4GALT6; PIGV; PIGZ; UGCG; UGT8

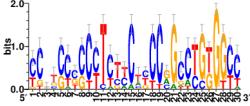
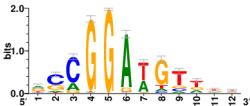
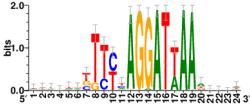
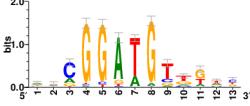
	Lipid-glycosylation pro.M02898	transfac.	3.22	0.2140	SMAD3 (directAnnotation).	5	B3GNT5; B4GALT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation pro.M02090	transfac.	3.21	0.2140	E2F4 (directAnnotation).	9	B3GALNT1; B3GNT5; B4GALNT1; B4GALT5; B4GALT6; PIGA; PIGM; UGCG; UGT8
	Lipid-glycosylation representative N1	dbtfbs.E2F8.	3.18	0.2120	E2F8 (directAnnotation).	9	B3GALNT1; B3GNT5; B4GALT5; B4GALT6; PIGB; PIGM; PIGV; PIGZ; UGCG
	Lipid-glycosylation pairs.TEAD4.	taipale. tf.	3.15	0.2110	FOXI1; TEAD4 (directAnnotation).	4	B3GNT5; PIGV; UGCG; UGT8
		FOXI1. RCATWC- C- NNNNNNNNNNNNNRT- MAACA. CAP. repr					

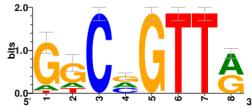
	Lipid-glycosylation pairs.TFAP2 HES7. NNCRC-GYGNNNN! C- NNNGGS. CAP. repr	taipale.	tf.	3.15	0.2110	HES7; TFAP2C (directAnnotation).	3	B3GNT5; B4GALT6; UGCG
	Lipid-glycosylation cisbp.M00341	cisbp.	M00341	3.13	0.2100	PAX6 (directAnnotation).	8	A4GALT; B3GNT5; B4GALNT1; B4GALT5; B4GALT6; PIGZ; UGCG; UGT8
	Lipid-glycosylation taipale. cyt. meth.E2F2. GCGCGCG( GYW. eDBD. repr	taipale.	cyt.	3.11	0.2090	E2F2 (directAnnotation).	3	B3GALNT1; B4GALT6; UGCG
	Lipid-glycosylation hdpi.HIP2	hdpi.	HIP2	3.10	0.2080	UBE2K (directAnnotation).	4	B3GNT5; B4GALT6; UGCG; UGT8
	Lipid-glycosylation hdpi.GTF3C	hdpi.	GTF3C	3.08	0.2070	GTF3C2 (directAnnotation).	4	B3GNT5; B4GALT6; UGCG; UGT8

	Lipid-glycosylation pro.M04817	transfac.	3.07	0.2070	ZBTB33 (directAnnotation).	8	B3GALNT1; B3GNT5; B4GALNT1; B4GALT5; B4GALT6; PIGZ; UGCG; UGT8
	N-Glycosylation pro.M04721	transfac.	5.28	0.1610	STAT1 (directAnnotation).	7	ALG10; ALG10B; DPAGT1; FUT8; MGAT1; MGAT3; MGAT4B
	N-Glycosylation pro.M06483	transfac.	5.18	0.1590	ZNF595 (directAnnotation).	5	ALG14; FUT8; MGAT4A; MGAT4D; STT3B
	N-Glycosylation	swissregulon.	5.10	0.1570	E2F7 (inferredBy.Ort)	4	ALG10; ALG10B; FUT8; STT3B
	N-Glycosylation pairs.FOXO1.	taipale. tf.	4.89	0.1510	ELK3; FOXO1 ELK3. RCCG- GAWGTTKW. CAP	5	ALG10; ALG10B; MGAT1; UGGT1; UGGT2

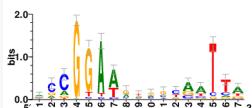
	N-Glycosylation swissregulon.	taipale. tf.	4.87	0.1510	FOXO1 (directAnnotation).	6	ALG10; ALG10B; ALG12; DPAGT1; MGAT1; MGAT4C
	N-Glycosylation pairs. ERF.	4.76	0.1480	ERF; FOXI1 (directAnnotation).	12	ALG10; ALG10B; ALG13; ALG8; DPAGT1; FUT8; MGAT1; MGAT4C; MGAT5; STT3B; UGGT1; UGGT2	
	N-Glycosylation pro.M04860	transfac.	4.71	0.1470	RXRA (directAnnotation).	10	ALG10; ALG10B; ALG5; MGAT1; MGAT3; MGAT4A; MGAT4C; MGAT5; UGGT1; UGGT2
	N-Glycosylation pairs. E2F1.	4.54	0.1420	E2F1; ELK1 (directAnnotation).	12	ALG10; ALG10B; ALG6; ALG8; DPM1; FUT8; MGAT4B; MGAT4D; MGAT5; STT3A; STT3B; UGGT2	



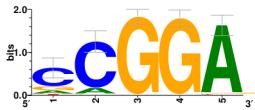
	N-Glycosylation	kznf.ZIM2. Glycosylation Im- beault2017. RP. ChIP-seq	4.07	0.1300	ZIM2 (directAn- notation).	4	ALG10; ALG10B; ALG8; STT3B
	N-Glycosylation	taipale. tf. pairs.FOXO1 ETV1. RCCG- GAWGTTK CAP	4.06	0.1300	ETV1; FOXO1 (directAn- notation).	9	ALG10; ALG10B; DPM1; FUT8; MGAT1; MGAT5; STT3B; UGGT1; UGGT2
	N-Glycosylation	tfdimers.MD00462	0.1300	0.1300	ARID3A; BCL6 (directAn- notation).	5	ALG1; ALG10; ALG10B; MGAT4A; MGAT5
	N-Glycosylation	taipale. tf. pairs.ETV5. FOXO1. RNCG- GATGT- TKWN. CAP	4.03	0.1290	ETV5; FOXO1 (directAn- notation).	12	ALG10; ALG10B; ALG8; DPM1; FUT8; MGAT1; MGAT4C; MGAT4D; MGAT5; STT3B; UGGT1; UGGT2



N- homer.GGCVGTCGTTAGR.0.1260 MYB (inferredBy.Orthology). 14 ALG1;  
Glycosylation MYB ALG10;  
ALG10B;  
ALG11;  
ALG13;  
ALG2;  
ALG3;  
ALG5;  
DPM1;  
FUT8;  
MGAT2;  
MGAT4C;  
STT3B;  
UGGT2



N- taipale. tf. 3.84 0.1240 DLX3;  
Glycosylation pairs.ERF. ERF  
DLX3.  
RSCG- (directAnnotation).  
GAANNNN'  
CAP. repr UGGT2



N- metacluster. 3.82 0.1240 10 ALG10;  
Glycosylation 138.2 ELF1;  
ELF2;

ELF4; ALG6;

ELK1; ALG8;

ELK1; DPM1;

ELK1; FUT8;

ELK1; MGAT1;

ELK3; STT3B;

ELK4; UGGT1;

ELK4; UGGT2

ELK4;

ELK4;

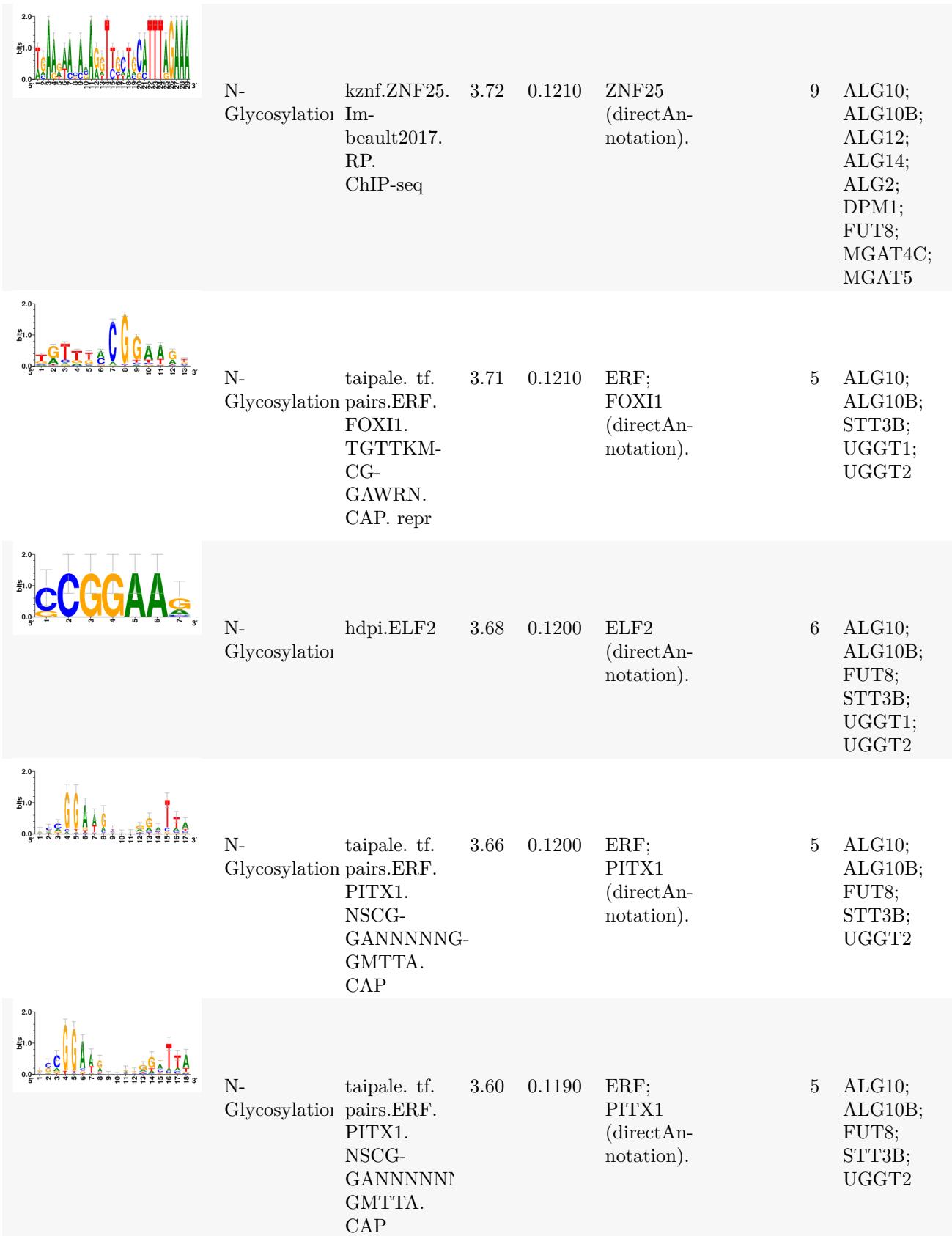
ELK4;

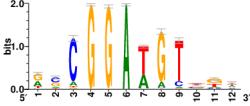
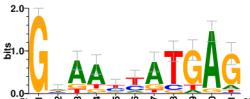
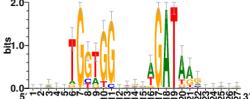
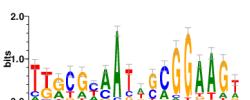
ELK4;

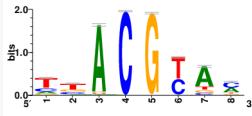
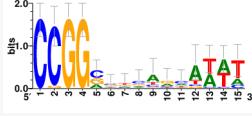
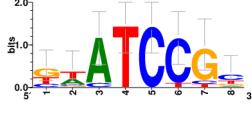
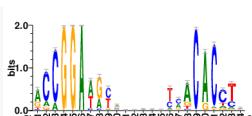
ERF;

ERG;

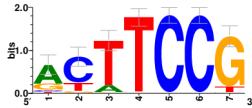
	N-Glycosylation metacluster.	3.79	0.1230	RARG (directAnnotation).	5	ALG10; ALG10B; ALG6; FUT8; MGAT4C
	N-Glycosylation pairs.FOXO1. ETV4. RCCG-GAWGTTKN. CAP	3.78	0.1230	ETV4; FOXO1 (directAnnotation).	6	ALG10; ALG10B; MGAT1; MGAT5; UGGT1; UGGT2
	N-Glycosylation pro.M08894	3.77	0.1230	OVOL1; OVOL2 (directAnnotation).	4	ALG10; ALG10B; FUT8; UGGT2
	N-Glycosylation pairs.ERF. TBX21. TMACAC-CGGAAG. CAP	3.76	0.1220	ERF; TBX21 (directAnnotation).	4	ALG10; ALG10B; DPM1; UGGT2
	N-Glycosylation metacluster.	3.73	0.1220	HSF5 (directAnnotation).	5	ALG10B; DPAGT1; MGAT1; MGAT4A; MGAT4C
	N-Glycosylation pairs.ETS2. RCCG-GAAGTG. HT	3.72	0.1220	ETS2 (directAnnotation).	5	ALG10; ALG10B; MGAT1; UGGT1; UGGT2



	N-Glycosylation pairs.ETV5.	taipale. tf.	3.60	0.1190	ETV5; FOXI1 (directAn- notation).	4	ALG10; ALG10B; MGAT1; UGGT1
	N-Glycosylation metacluster.	metacluster.	3.58	0.1180	SIX1 (directAn- notation).	5	ALG10; ALG10B; ALG3; MGAT4B; STT3B
	N-Glycosylation	tfdimers.MD003568	0.1170	0.1170	GATA1; GATA2; GATA3; GATA4; GATA5; GATA6; ING4 (directAn- notation).	6	ALG10; ALG10B; ALG2; MGAT3; MGAT4D; STT3B
	N-Glycosylation pro.M06188	transfac.	3.48	0.1150	ZNF135 (directAn- notation).	6	ALG12; FUT8; MGAT3; MGAT4A; STT3B; UGGT1
	N-Glycosylation pairs.CEBPG.	taipale. tf.	3.39	0.1130	CEBPG; ELF1 (directAn- notation).	4	ALG10; ALG10B; MGAT3; MGAT4C

	N-Glycosylation	swissregulon.	3.38	0.1130	GMEB2 (directAnnotation).	9	ALG1; ALG10; ALG13; ALG14; DPM1; MGAT1; MGAT4A; MGAT4B; MGAT5
	N-Glycosylation	metacluster. 141.13	3.37	0.1130	METTL14 (inferredBy.Orthology).	4	ALG10; ALG10B; ALG12; ALG9
	N-Glycosylation	transfac. pro.M01298	3.36	0.1120	MECP2 (directAnnotation).	4	ALG10; ALG10B; STT3B; UGGT2
	N-Glycosylation	transfac. pro.M07612	3.32	0.1110	SFPQ (directAnnotation).	10	ALG10; ALG10B; ALG6; FUT8; MGAT1; MGAT4B; MGAT4D; STT3A; STT3B; UGGT2
	N-Glycosylation	taipale. tf. pairs.ETV2. EOMES. RCCG- GANNNNN CTN. CAP. repr	3.28	0.1100	EOMES; ETV2 (directAnnotation).	3	ALG10; STT3B; UGGT2

	N-Glycosylation	cisbp.M02645	3.28	0.1100	ETS1 (directAnnotation).	6	ALG10; ALG10B; DPAGT1; FUT8; UGGT1; UGGT2
	N-Glycosylation	taipale. tf.	3.25	0.1100	ETV2; PAX5 (directAnnotation).	4	ALG10; ALG10B; ALG12; STT3B
	N-Glycosylation	taipale. tf.	3.23	0.1090	ETV2; HES7 (directAnnotation).	6	ALG1; ALG5; FUT8; MGAT3; MGAT4A; UGGT2
	N-Glycosylation	taipale. tf.	3.22	0.1090	HES7; TEAD4 (directAnnotation).	6	ALG10; ALG10B; ALG6; FUT8; MGAT4D; UGGT2



N- metacluster. Glycosylation 3.22 0.1090

Glycosylation 191.3

ELF1;  
 ELF1;  
 ELF1;  
 ELF1;  
 ELF4;  
 ELK1;  
 ELK3;  
 ELK3;  
 ELK4;  
 ELK4;  
 ERF;  
 ETS1;  
 ETS2;  
 ETV3;  
 ETV4;  
 ETV5;  
 FEV;  
 FEV;  
 FLI1;  
 FLI1;  
 GABPA;  
 GABPA;  
 GABPA;  
 GABPA;  
 GABPA;  
 GABPA;  
 SPDEF;  
 ZNF200  
 (directAn-  
 notation).  
 ELK1;  
 ELK1;  
 ELK3;  
 ELK3;  
 ELK4;  
 ELK4;  
 ETV1;  
 ETV1;  
 ETV4;  
 ETV4;  
 ETV4;  
 ETV5;  
 GABPA;  
 GABPA  
 (in-  
 ferredBy.Orthology).

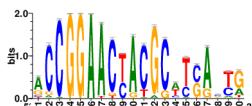
4 ALG10;  
 ALG10B;  
 UGGT1;  
 UGGT2

	N-Glycosylation metacluster. 152.8	3.19	0.1080	ZNF208 (directAnnotation).	5	ALG8; DPAGT1; MGAT4A; MGAT4C; STT3B
	N-Glycosylation transfac. Glycosylation pro.M06662	3.17	0.1070	ZNF426 (directAnnotation).	2	ALG10; ALG10B
	N-Glycosylation taipale. tf. pairs.ELK1.	3.15	0.1070	ELK1; TBX21 (directAnnotation).	4	ALG10; ALG10B; DPM1; UGGT2
	N-Glycosylation taipale. tf. pairs.ETV2.	3.14	0.1070	ETV2; FOXO6 (directAnnotation).	11	ALG10; ALG10B; ALG13; ALG3; ALG8; DPAGT1; FUT8; MGAT1; MGAT4C; UGGT1; UGGT2
	N-Glycosylation transfac. Glycosylation pro.M06222	3.14	0.1070	ZNF273 (directAnnotation).	9	ALG11; ALG6; ALG8; FUT8; MGAT1; MGAT4A; MGAT4B; MGAT4D; STT3B

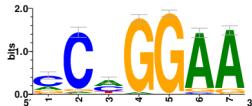
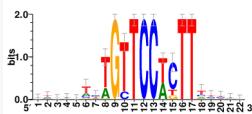
	N-Glycosylation metacluster. Glycosylation 183.4	3.12	0.1060	ETS1 (inferredBy.Orthology).	4	ALG10; ALG10B; FUT8; UGGT2
	N-Glycosylation metacluster. Glycosylation 93.4	3.11	0.1060	BCL6B (directAnnotation).	4	FUT8; MGAT3; MGAT4C; UGGT1
	N-Glycosylation Imbeault2017. OM. RCADE	3.09	0.1050	ZNF610 (directAnnotation).	4	FUT8; MGAT4A; STT3B; UGGT2
	N-Glycosylation cyt. meth.IRX5. NCRT- GTNNNAC/ eDBD. repr	3.07	0.1050	IRX5 (directAnnotation).	5	ALG10; ALG10B; DPM1; MGAT1; MGAT5
	N-Glycosylation pairs.E2F3. ONE-CUT2. NNS-GCGC-SNNNATC-GAYN. CAP. repr	3.07	0.1050	E2F3; ONECUT2 (directAnnotation).	6	ALG10; ALG10B; ALG5; ALG9; FUT8; STT3B



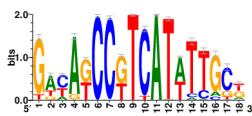
N- transfac. 3.06 0.1050 ZNF208  
 Glycosylation pro.M06051 (directAn-  
 notation).



N- taipale. tf. 3.05 0.1050 ELK1;  
 Glycosylation pairs.ELK1. PAX5  
                   PAX5. (directAn-  
                   RSCG- notation).  
                   GAACY-  
                   ACGCWYSANTG.  
                   CAP. repr



N- transfac. 3.03 0.1040 NR2C2  
 Glycosylation pro.M01776 (directAn-  
 notation).



N- transfac. 3.02 0.1040 ZFP82 (inferredBy.Orthology).  
Glycosylation pro.M06880

7 ALG10;  
ALG10B;  
ALG14;  
DPM1;  
FUT8;  
MGAT1;  
UGGT1

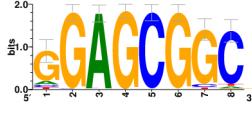
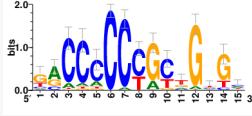
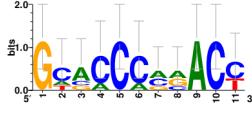
5 ALG10;  
ALG10B;  
ALG12;  
ALG5;  
STT3B

- 6 ALG10;  
ALG10B;  
ALG13;  
MGAT3;  
MGAT5;  
STT3B

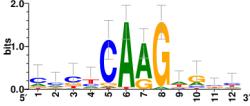
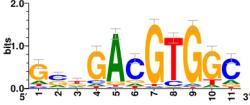
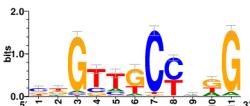
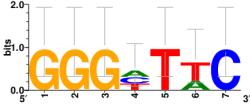
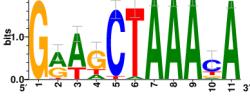
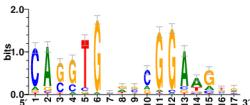
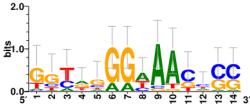
3 ALG10;  
ALG10B;  
FUT8

3 ALG10;  
ALG10B;  
MGAT4C

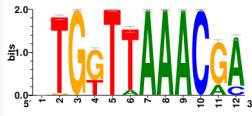
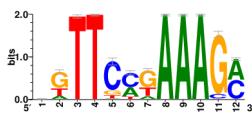
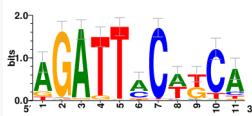
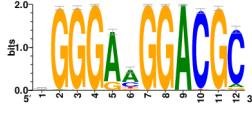
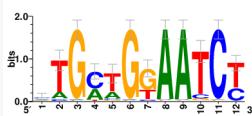
5 ALG10;  
ALG10B;  
MGAT4A;  
STT3B;  
UGGT2

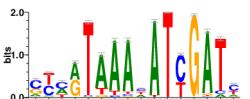
	N- Glycosylation pro.M05799	transfac. metacluster.	3.02	0.1040	ZNF605 (directAn- notation).	15	ALG10; ALG10B; ALG12; ALG6; DPAGT1; DPM1; FUT8; MGAT1; MGAT3; MGAT4A; MGAT4D; MGAT5; STT3A; STT3B; UGGT2
	N- Glycosylation 144.5	metacluster.	3.01	0.1030	ZNF610; ZNF610; ZNF610 (directAn- notation).	3	FUT8; MGAT4A; STT3B
	O- glycosylation 80.6 (mucin)	metacluster.	3.87	0.1900	ZIC4 (directAn- notation).	6	C1GALT1; C1GALT1C1; GALNT13; GALNT3; GALNT7; GALNT9
	O- glycosylation pro.M04631 (mucin)	transfac.	3.45	0.1750	RREB1 (directAn- notation).	4	C1GALT1; GALNT13; GALNT3; GALNT9

	O-glycosylation (mucin)	metacluster.	3.42	0.1730	DMRT1; DMRT1 (directAnnotation). DMRTB1; DMRTB1 (inferredBy.Ort)	6	GALNT10; GALNT11; GALNT2; GALNT3; GALNT6; GALNT9
	O-glycosylation (mucin)	transfac. pro.M08871	3.39	0.1720	BHLHE41 (directAnnotation).	4	C1GALT1; GALNT13; GALNT3; GALNTL6
	O-glycosylation (mucin)	metacluster.	3.33	0.1700	ZNF189; ZNF84; ZNF84 (directAnnotation).	10	B3GNT6; C1GALT1; C1GALT1C1; GALNT13; GALNT16; GALNT3; GALNT7; GALNT8; GAL- NTL6; GCNT1
	O-glycosylation (mucin)	transfac. pro.M06069	3.32	0.1690	ZNF253 (directAnnotation).	4	C1GALT1; GALNT14; GALNT15; GALNTL6
	O-glycosylation (mucin)	transfac. pro.M01243	3.28	0.1680	MTF1 (directAnnotation).	5	C1GALT1; GALNT13; GALNT3; GALNT9; GALNTL6

	O-glycosylation pro.M00794 (mucin)	transfac. hocomoco.XI HU-MAN.H11M	3.28 3.26	0.1680 0.1670	NKX2-1 (directAnnotation).	4	C1GALT1; GALNT13; GALNT3; GALNTL6
	O-glycosylation (mucin)	hocomoco.XI HU-MAN.H11M	3.26	0.1670	XBP1 (directAnnotation).	4	C1GALT1; GALNT13; GALNT3; GALNT9
	O-glycosylation (mucin)	hocomoco.RFX3617 MOUSE.H11MO.0.C	3.17	0.1640	RFX6 (inferredBy.Orthology).	4	C1GALT1; GALNT3; GALNT9; GALNTL6
	O-glycosylation (mucin)	hdpi.HCFC2	3.16	0.1630	HCFC2 (directAnnotation).	3	GALNT3; GALNT9; GALNTL6
	O-glycosylation (mucin)	metacluster. 134.5	3.13	0.1620	ZNF184 (directAnnotation).	4	GALNT10; GALNT12; GALNT5; GALNTL6
	O-glycosylation (mucin)	taipale. tf. pairs.ETV5. TCF3. CASST- GNRNNG- GAAGNN. CAP	3.10	0.1610	ETV5; TCF3 (directAnnotation).	4	C1GALT1; GALNT13; GALNT3; GALNTL6
	O-glycosylation (mucin)	hocomoco.ZEP3.09 HU-MAN.H11MO.0.D	3.09	0.1610	HIVEP2 (directAnnotation).	3	GALNT3; GALNT9; GALNTL6

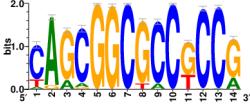
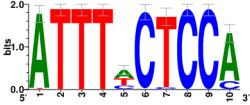
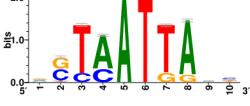
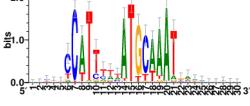
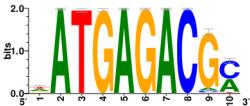
	O-glycosylation transfac. (mucin)	pro.M00333	3.04	0.1590	ZBTB14 (directAnnotation).	4	C1GALT1; GALNT13; GALNT3; GALNTL6
	O-glycosylation (mucin)	hocomoco.FEV3.01 HU-MAN.H11MO.0.B	0.1580	FEV (directAnnotation).	4	C1GALT1; GALNT13; GALNT3; GALNTL6	
	O-glycosylation (non-mucin)	transfac. pro.M05931	5.28	0.1260	ZNF556 (directAnnotation).	11	CHPF2; CHSY1; CSGALN- ACT2; EOGT; EXT1; EXT2; GXYLT2; POFUT2; TMTC2; TMTC3; XXYLT1
	O-glycosylation (non-mucin)	transfac. pro.M05961	5.28	0.1260	ZNF407 (directAnnotation).	8	CHSY3; CSGALN- ACT1; CSGALN- ACT2; GXYLT1; GXYLT2; POMGNT1; POMT1; TMTC1

	O-glycosylation (non-mucin)	transfac. pro.M06150	4.80	0.1170	ZNF81 (directAnnotation).	7	B3GALT6; CHSY3; COL-GALT2; CSGALN-ACT1; EXTL3; POFUT2; TMTC2
	O-glycosylation (non-mucin)	transfac. pro.M06677	4.66	0.1150	ZNF285 (directAnnotation).	9	CHPF2; MGAT5B; POFUT2; POG-LUT1; POMGNT1; TMTC1; TMTC3; XXYLT1; XYLT1
	O-glycosylation (non-mucin)	metacluster. 48.1	4.32	0.1080	ZNF85; ZNF85 (directAnnotation).	4	B3GALNT2; B4GALT7; EXTL3; TMTC4
	O-glycosylation (non-mucin)	transfac. pro.M06074	4.20	0.1060	ZNF732 (directAnnotation).	5	CHSY1; EOGT; GXYLT1; TMTC2; XYLT2
	O-glycosylation (non-mucin)	metacluster. 46.3	4.14	0.1050	ZNF85 (directAnnotation).	8	B3GALNT2; B4GALT7; CHSY1; EXTL3; OGT; POFUT1; TMTC2; XYLT1

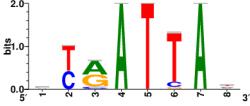
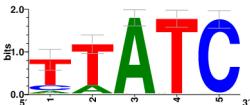
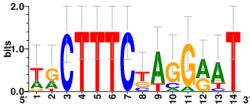
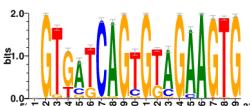
	O-glycosylation metacluster. 187.3 (non-mucin)	metacluster.	3.99	0.1020	SPDEF; SPDEF (directAnnotation).	12	B3GALNT2; CHSY1; CSGALN- ACT2; EXT1; EXTL3; GXYLT2; OGT; POG- LUT1; POMGNT2; POMT1; TMTC4; XXYLT1
	O-glycosylation pairs.CUX1. (non-mucin)	taipale. tf.	3.73	0.0971	CUX1; HOXB13 (directAnnotation).	5	EXT1; GXYLT2; OGT; POFUT2; TMTC2
	O-glycosylation (non-mucin)	jaspar.MA11163171	0.0965	RBPJ (directAnnotation).	5	CHSY1; EOGT; LFNG; MFNG; XXYLT1	
	O-glycosylation (non-mucin)	transfac. pro.M06943	3.67	0.0959	PBX3 (directAnnotation).	10	B3GALNT2; B3GALT6; B3GLCT; CHSY3; COL- GALT2; CSGALN- ACT1; MGAT5B; OGT; TMTC1; TMTC2

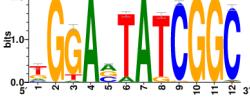
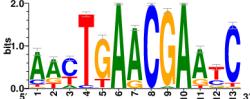
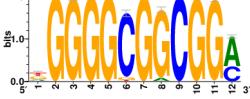
	O-glycosylation (non-mucin)	swissregulon.hs3DMC0.0946	3.54	0.0934	DMC1 (directAnnotation).	5	B3GLCT; CHSY1; LFNG; POFUT2; TMTC1
	O-glycosylation (non-mucin)	metacluster. 10.30	3.54	0.0934	MXI1 (inferredBy.Org)	5	CSGALNACT1; LFNG; POFUT2; TMTC1; TMTC2
	O-glycosylation (non-mucin)	transfac. pro.M05671	3.54	0.0933	ZNF25 (directAnnotation).	5	MGAT5B; POFUT2; TMTC1; TMTC2; XXYLT1
	O-glycosylation (non-mucin)	kznf.ZN595. HUMAN. Schmitges2016. RCADE	3.52	0.0930	ZNF595 (directAnnotation).	15	CHSY3; COL-GALT2; CSGALN-ACT1; CSGALN-ACT2; EOGT; EXT1; EXT2; LFNG; MGAT5B; POFUT2; POMGNT1; TMTC1; TMTC2; TMTC4; XYLT1

	O-glycosylation (non-mucin)	taipale. tf. pairs.ETV2.	3.46	0.0918	ETV2; ONECUT2 (directAnnotation). RCCG- GAANNNNNATC- GATN. CAP. repr	4	CSGALNACT1; LFNG; POMGNT1; RFNG
	O-glycosylation (non-mucin)	swissregulon.	3.38	0.0903	CLOCK (directAnnotation).	5	CSGALNACT1; LFNG; POFUT2; TMTC1; TMTC2
	O-glycosylation (non-mucin)	transfac. pro.M05981	3.37	0.0902	ZNF233 (directAnnotation).	5	CSGALNACT1; CSGALN- ACT2; EXTL3; LFNG; TMTC1
	O-glycosylation (non-mucin)	metacluster. 27.3	3.34	0.0896	ZNF658 (directAnnotation).	5	CHSY3; EXT1; EXTL1; TMTC3; XYLT2
	O-glycosylation (non-mucin)	transfac. pro.M05453	3.34	0.0896	ZBTB26 (directAnnotation).	4	CHSY1; EXTL3; MGAT5B; XYLT1
	O-glycosylation (non-mucin)	transfac. pro.M06542	3.33	0.0894	ZNF502 (directAnnotation).	6	CSGALNACT2; EXT2; GXYLT2; POMGNT2; TMTC2; XXYLT1

	O-glycosylation (non-mucin)	transfac. glycosylation pro.M05830	3.31	0.0890	ZNF66 (directAnnotation).	8	CHSY1; COL- GALT2; CSGALN- ACT2; EXT1; GXYLT2; LFNG; POMGNT2; TMTC1
	O-glycosylation (non-mucin)	metacluster. 168.17	3.30	0.0889	ZNF417; ZNF587 (directAnnotation).	4	EXTL3; GXYLT2; MGAT5B; XYLT1
	O-glycosylation (non-mucin)	taipale. pairs.HOXA3.	3.26	0.0881	HOXA3 (directAnnotation).	6	B3GLCT; EOGT; EXT1; EXTL1; MFNG; MGAT5B
	O-glycosylation (non-mucin)	tfdimers.MD	3.24	0.0877	POU2F2; YY1 (directAnnotation).	5	B3GALT6; LFNG; MGAT5B; POMGNT1; XXYLT1
	O-glycosylation (non-mucin)	transfac. glycosylation pro.M06041	3.19	0.0867	ZNF726 (directAnnotation).	9	B4GALT7; CHPF; CHSY3; COL- GALT2; EXTL1; OGT; POFUT2; TMTC1; TMTC2



	O-glycosylation (non-mucin)	jaspar.MA07073215	3.15	0.0860	MNX1 (directAnnotation).	13	B3GLCT; CHSY3; EXT1; EXTL1; GXYLT2; LFNG; MFNG; MGAT5B; POFUT1; POMGNT1; POMGNT2; TMTC3; TMTC4
	O-glycosylation (non-mucin)	metacluster. 117.2	3.15	0.0859	GATA3; GATA3; GATA3; GATA5; GATA5;	7	B4GALT7; CSGALN- ACT1; GXYLT1; LFNG; POG- LUT1; RFNG; TMTC2
	O-glycosylation (non-mucin)	transfac. pro.M01185	3.14	0.0858	BCL6 (directAnnotation).	4	LFNG; MFNG; TMTC2; XYLT1
	O-glycosylation (non-mucin)	transfac. pro.M05933	3.11	0.0853	ZNF552 (directAnnotation).	6	B3GALT6; CSGALN- ACT1; EXTL1; EXTL2; MFNG; MGAT5B

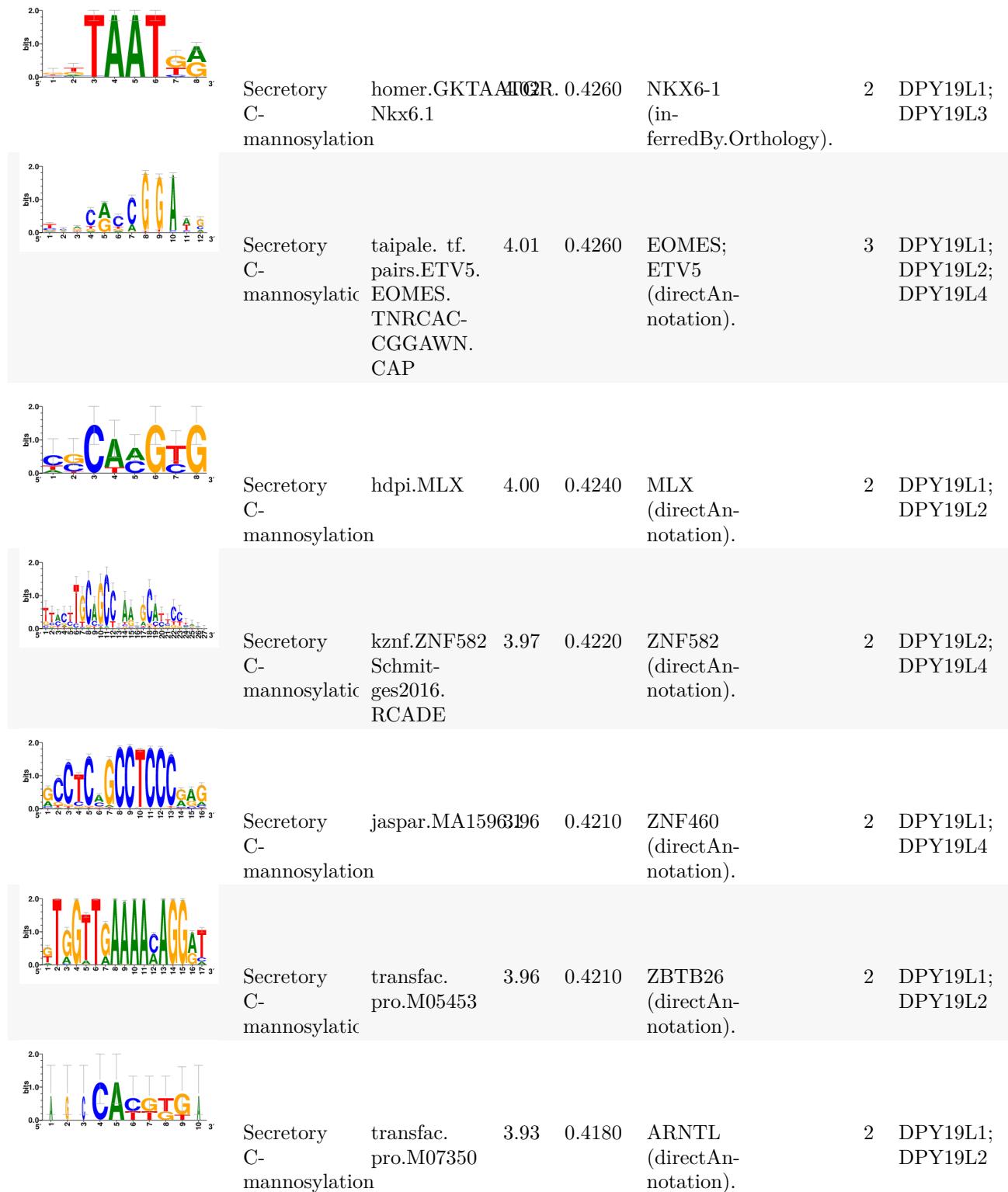
	O-glycosylation (non-mucin)	transfac. pro.M06493	3.11	0.0852	ZNF668 (inferredBy.Orthology).	4	COLGALT2; POFUT2; POMGNT2; TMTC4
	O-glycosylation (non-mucin)	transfac. pro.M05517	3.11	0.0852	IKZF2 (directAnnotation).	6	B3GLCT; B4GALT7; EXT1; EXTL1; POG-LUT1; TMTC1
	O-glycosylation (non-mucin)	transfac. pro.M06813	3.06	0.0844	SALL4 (inferredBy.Orthology).	4	B3GLCT; CSGALN-ACT2; POFUT1; TMTC1
	O-glycosylation (non-mucin)	transfac. pro.M05712	3.06	0.0844	ZNF134 (directAnnotation).	18	B3GALNT2; B3GLCT; B4GALT7; CHSY3; COL-GALT2; CSGALN-ACT2; EXTL3; GXYLT1; GXYLT2; LFNG; OGT; POMGNT2; TMTC1; TMTC2; TMTC3; TMTC4; XYLT1; XYLT2

	O-glycosylation (non-mucin)	transfac. pro.M06769	3.05	0.0842	ZNF391 (directAnnotation).	8	CHSY3; CSGALN- ACT1; EOGT; EXT2; EXTL2; EXTL3; TMTC2; XYLT2
	O-glycosylation (non-mucin)	transfac. pro.M06409	3.05	0.0841	ZNF329 (directAnnotation).	3	EXTL1; EXTL3; MGAT5B
	O-glycosylation (non-mucin)	transfac. pro.M05379	3.02	0.0836	ZNF740 (inferredBy.Orthology).	5	CHSY1; EXTL3; GXLYT2; MGAT5B; XYLT1
	O-glycosylation (non-mucin)	transfac. pro.M05545	3.01	0.0834	IKZF4 (inferredBy.Orthology).	5	CSGALNACT2; LFNG; MFNG; OGT; POFUT2
	Secretory C-mannosylation	taipale. tf. pairs.ELK1. TBX21. TNRCAC- CG- GAAGNN. CAP. repr	5.71	0.5830	ELK1; TBX21 (directAnnotation).	3	DPY19L1; DPY19L2; DPY19L4

	Secretory C-mannosylatic	kznf.ZNF783	5.63	0.5760	ZNF783 (directAnnotation).	3	DPY19L1; DPY19L3; DPY19L4
	Secretory C-mannosylation	taipale. tf. pairs.ELK1.	5.49	0.5630	ELK1; TBX21 (directAnnotation). SRNNNNNNNNNNNNNNNNNCG- GAAGYN. CAP	3	DPY19L1; DPY19L2; DPY19L4
	Secretory C-mannosylatic	kznf.ZNF792	4.79	0.4980	ZNF792 (directAnnotation).	3	DPY19L1; DPY19L3; DPY19L4
	Secretory C-mannosylation	transfac. pro.M01692	4.49	0.4700	LTF (directAnnotation).	2	DPY19L1; DPY19L2
	Secretory C-mannosylatic	transfac. pro.M05752	4.47	0.4680	ZNF57 (directAnnotation).	2	DPY19L1; DPY19L2
	Secretory C-mannosylation	taipale. tf. pairs.ETV2.	4.40	0.4620	ETV2; TBX21 (directAnnotation). TMACACMG- GAARN. CAP	3	DPY19L1; DPY19L2; DPY19L4

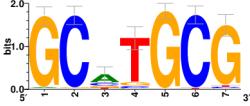
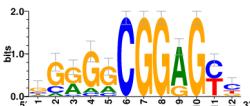
	Secretory C- mannosylatic	metacluster. 145.10	4.37	0.4590	ZNF24 (directAn- notation).	2	DPY19L1; DPY19L4
	Secretory C- mannosylation	cisbp.M00152	4.37	0.4590	ZBTB3 (in- ferredBy.Orthology).	2	DPY19L1; DPY19L2
	Secretory C- mannosylatic	hocomoco.HI HU- MAN.H11M	4.35	0.4570	HMBOX1 (directAn- notation).	3	DPY19L1; DPY19L3; DPY19L4
	Secretory C- mannosylation meth.FOXO3.	taipale. cyt.	4.34	0.4560	FOXO3 (directAn- notation).	2	DPY19L1; DPY19L2
	Secretory C- mannosylatic	NTCCC- CACACN. eDBD					
	Secretory C- mannosylatic	pairs.CUX1. HOXA13. ATCRATNN CRTAAA. CAP. repr	4.22	0.4450	CUX1; HOXA13 (directAn- notation).	2	DPY19L1; DPY19L3
	Secretory C- mannosylation	pairs.ELK1. EOMES. RGGTGN- GANNNNNNNTNNCAC- CG- GAAGY. CAP	4.22	0.4450	ELK1; EOMES (directAn- notation).	3	DPY19L1; DPY19L2; DPY19L4

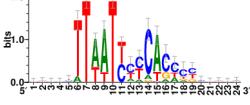
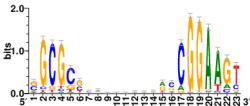
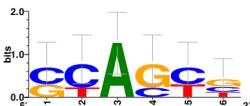
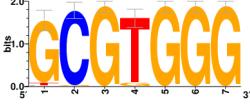
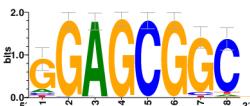
	Secretory C-mannosylatic	taipale. tf. pairs.TFAP2	4.20	0.4440	DLX3; TFAP2C (directAn- notation).	3	DPY19L1; DPY19L2; DPY19L4
	Secretory C-mannosylation	kznf.ZNF2. Im-beault2017. RP. ChIP-seq	4.18	0.4410	ZNF2 (directAn- notation).	4	DPY19L1; DPY19L2; DPY19L3; DPY19L4
	Secretory C-mannosylatic	transfac. pro.M06340	4.17	0.4410	ZNF790 (directAn- notation).	2	DPY19L1; DPY19L2
	Secretory C-mannosylation	taipale. tf. pairs.ETV2. EOMES. NGGT- GTNNNNNNNNNNNNNNNC- CG- GAWNNA. CAP. repr	4.14	0.4380	EOMES; ETV2 (directAn- notation).	2	DPY19L1; DPY19L2
	Secretory C-mannosylatic	jaspar.MA17	4.11	0.4350	ZNF549 (directAn- notation).	3	DPY19L1; DPY19L2; DPY19L4
	Secretory C-mannosylation	metacluster. 80.6	4.05	0.4290	ZIC4 (directAn- notation).	2	DPY19L1; DPY19L4
	Secretory C-mannosylatic	transfac. pro.M06637	4.03	0.4270	ZNF577 (directAn- notation).	2	DPY19L3; DPY19L4

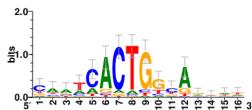


	Secretory C-mannosylatic	transfac. pro.M01877	3.85	0.4110	GATA2 (directAnnotation).	3	DPY19L1; DPY19L2; DPY19L4
	Secretory C-mannosylation	transfac. pub-lic.M00468	3.85	0.4110	KLF12 (directAnnotation).	2	DPY19L1; DPY19L2
	Secretory C-mannosylatic	tfdimers.MD	3.84	0.4100	HOXA13; NR1H4; NR1I2; NR1I3; RXRA (directAnnotation).	3	DPY19L1; DPY19L2; DPY19L4
	Secretory C-mannosylation	taipale. tf. pairs.E2F1. HES7. SRCRC- GYGSYNNNN- GCGCSN. CAP. repr	3.84	0.4100	E2F1; HES7 (directAnnotation).	4	DPY19L1; DPY19L2; DPY19L3; DPY19L4
	Secretory C-mannosylatic	taipale. tf. pairs.ETV5. EOMES. RNGT- GNNNNNNN CRCCG- GAWSN. CAP	3.83	0.4090	EOMES; ETV5 (directAnnotation).	3	DPY19L1; DPY19L2; DPY19L4
	Secretory C-mannosylation	transfac. pro.M06444	3.82	0.4080	ZNF557 (directAnnotation).	2	DPY19L1; DPY19L4

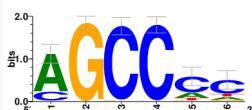
	Secretory C- mannosylatic	transfac. pro.M00652	3.79	0.4050	NRF1 (directAn- notation).	2	DPY19L1; DPY19L2
	Secretory C- mannosylation	taipale. tf. pairs.E2F1. ELK1. SGCGC- NNNNNNNNNNCG- GAAGN. CAP. repr	3.77	0.4040	E2F1; ELK1 (directAn- notation).	4	DPY19L1; DPY19L2; DPY19L3; DPY19L4
	Secretory C- mannosylatic	metacluster. 198.5	3.77	0.4030	TCFL5; TCFL5 (directAn- notation).	2	DPY19L1; DPY19L2
	Secretory C- mannosylation	taipale. tf. pairs.ERF. TBX21. NRGTGT- NANNNNNNNNNNNNNC- CG- GAANN. CAP	3.75	0.4010	ERF; TBX21 (directAn- notation).	3	DPY19L1; DPY19L2; DPY19L4
	Secretory C- mannosylatic	transfac. pro.M03878	3.74	0.4010	HIVEP2 (directAn- notation).	2	DPY19L1; DPY19L2
	Secretory C- mannosylation	metacluster. 51.22	3.72	0.3990	MEOX1 (directAn- notation).	3	DPY19L1; DPY19L2; DPY19L3

	Secretory C- mannosylatic	metacluster. 55.3	3.68	0.3950	E2F6; EGR1; NRF1; NRF1; NRF1; NRF1; NRF1; NRF1; NRF1; NRF1; NRF1; NRF1; NRF1; NRF1; NRF1; ZBTB2; ZSCAN10 (directAn- notation). NFE2L1; NRF1; NRF1; NRF1 (in- ferredBy.Ort	2	DPY19L1; DPY19L2
	Secretory C- mannosylationbeault2017.	kznf.ZNF441. Im-	3.67	0.3940	ZNF441 (directAn- notation).	3	DPY19L1; DPY19L3; DPY19L4
	Secretory C- mannosylatic	transfac. pro.M06784	3.67	0.3940	ZNF780B (directAn- notation).	2	DPY19L1; DPY19L4
	Secretory C- mannosylation	transfac. pro.M04866	3.64	0.3920	HDAC2 (directAn- notation).	2	DPY19L1; DPY19L2
	Secretory C- mannosylatic	c2h2. zfs.M0406	3.63	0.3910	ZNF691 (in- ferredBy.Ort	2	DPY19L1; DPY19L4

	Secretory C- mannosylation	tfdimers.MD003123	0.3900	ARID3A; PAX4 (directAn- notation).	2	DPY19L1; DPY19L4	
	Secretory C- mannosyltic	transfac. pro.M01227	3.60	0.3880	MAFB (directAn- notation).	2	DPY19L1; DPY19L2
	Secretory C- mannosylation	taipale. tf. pairs.E2F1. ELK1. SGCGC- NNNNNNNNNNNCG- GAAGN. CAP. repr	3.59	0.3870	E2F1; ELK1 (directAn- notation).	3	DPY19L1; DPY19L3; DPY19L4
	Secretory C- mannosyltic	transfac. pro.M03576	3.58	0.3860	UBP1 (in- ferredBy.Ort	2	DPY19L1; DPY19L2
	Secretory C- mannosylation	metacluster. 131.6	3.56	0.3840	EGR2; EGR4 (directAn- notation). EGR2; EGR3 (in- ferredBy.Orthology).	2	DPY19L1; DPY19L4
	Secretory C- mannosyltic	metacluster. 144.5	3.50	0.3790	ZNF610; ZNF610; ZNF610 (directAn- notation).	3	DPY19L1; DPY19L3; DPY19L4



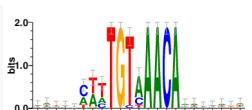
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C- pro.M02929 (in-  
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Secretary metacluster. 3.41 0.3700 ZNF682  
C- 195.1 (directAn-  
mannosylatic notation).



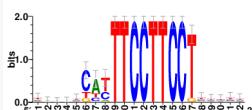
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 C- HU- (directAn-  
 mannosylationMAN.H11MO.0.C notation).



Secretary tfdimers.MD 3.38 0.3670 FOXO1;  
C- SOX10  
mannosylatic (directAn-  
annotation).



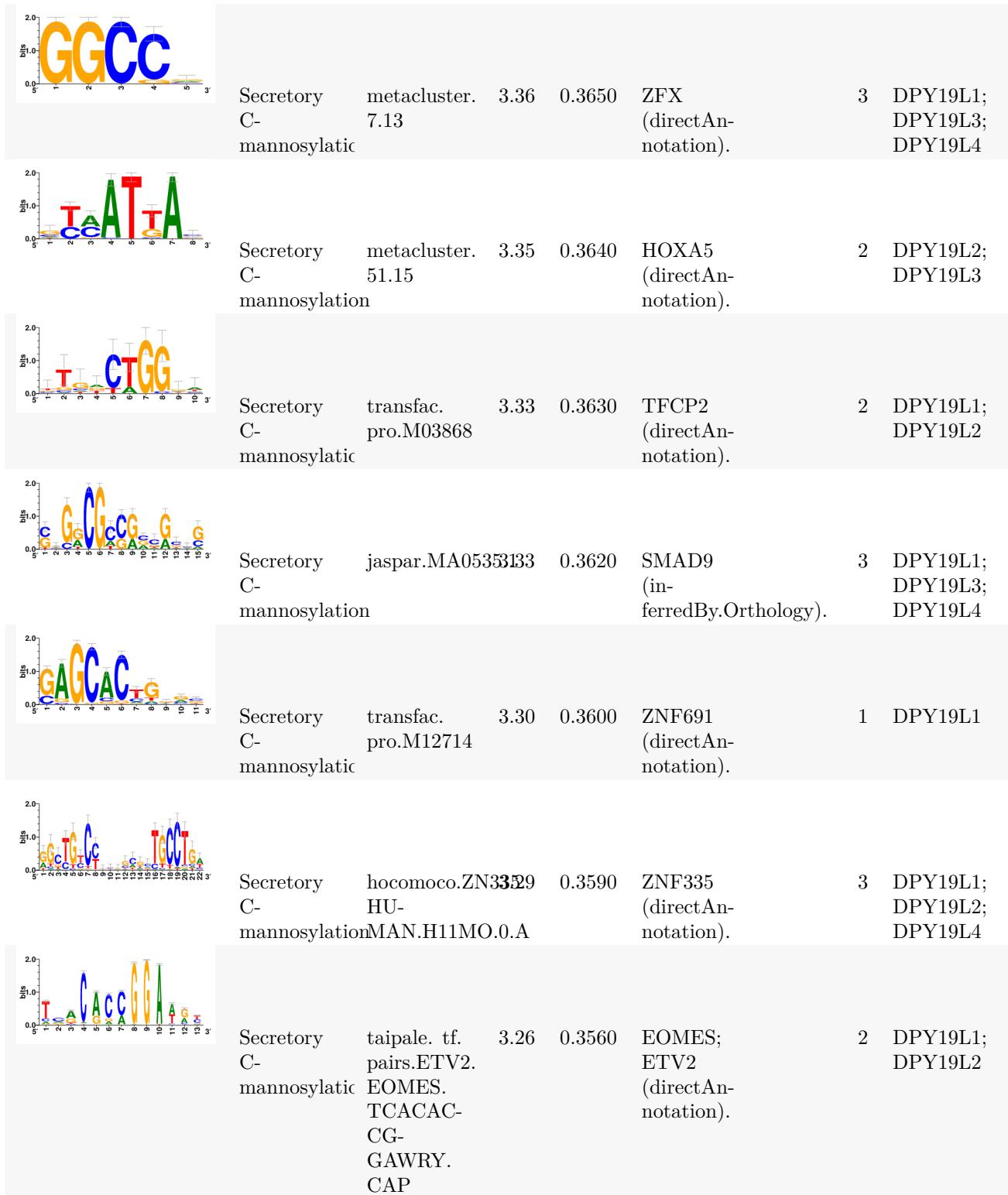
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C- MOUSE.H11MO.0.A (in-  
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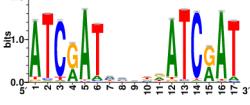
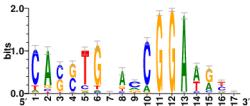
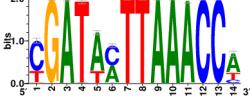
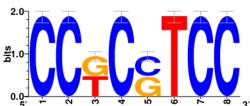


Secretory tfdimers.MD 3.38 0.3670 ELF1;  
C- STAT1  
mannosylatic (directAn-  
annotation).

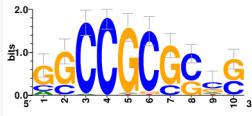
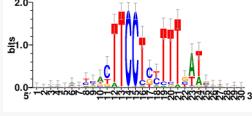
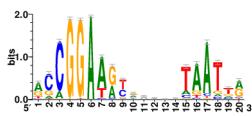


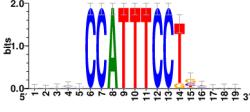
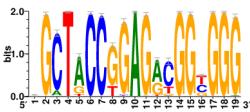
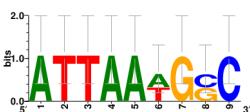
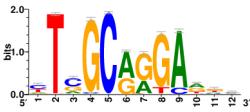
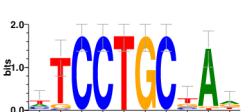
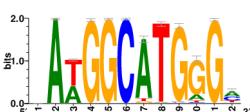
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 C- HEK293. (direct An-  
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 merged.  
 N1



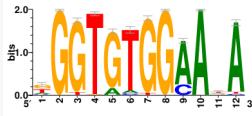
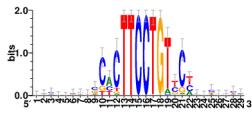
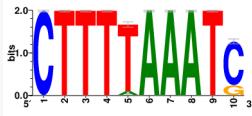
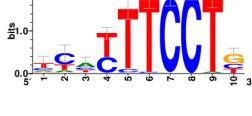
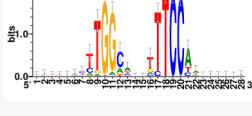
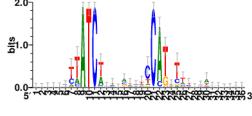
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	Secretory C-mannosylatic	taipale. tf. pairs.ETV2. TCF3. CASST- GNNCCG- GAWRYN. CAP. repr	3.16	0.3470	ETV2; TCF3 (directAnnotation).	2	DPY19L1; DPY19L2
	Secretory C-mannosylation	transfac. C-pro.M06936	3.16	0.3470	MAFF (inferredBy.Orthology).	2	DPY19L1; DPY19L2
	Secretory C-mannosylatic	transfac. C-pro.M05432	3.15	0.3460	ZSCAN18 (directAnnotation).	2	DPY19L1; DPY19L4
	Secretory C-mannosylation	kznf.ZNF202. 3.14 Im-mannosylationbeault2017. OM. MEME	0.3450	ZNF202 (directAnnotation).	2	DPY19L1; DPY19L4	
	Secretory C-mannosylatic	kznf.ZNF610 3.12 Im-mannosylation beault2017. OM. RCADE	0.3440	ZNF610 (directAnnotation).	3	DPY19L1; DPY19L3; DPY19L4	

	Secretory C- mannosylation	metacluster. 126.3	3.11	0.3420	LIN28B; LIN28B (directAn- notation).	2	DPY19L1; DPY19L4
	Secretory C- mannosylatic	dbtfbs.ZSCA HEK293. ENCSR768V merged.	3.08	0.3400	ZSCAN30 (directAn- notation).	3	DPY19L1; DPY19L3; DPY19L4
	Secretory C- mannosylation	transfac. pro.M05299	3.06	0.3380	NKX2-6 (directAn- notation).	2	DPY19L1; DPY19L4
	Secretory C- mannosylatic	transfac. pub- lic.M00087	3.04	0.3360	IKZF1 (directAn- notation).	3	DPY19L1; DPY19L2; DPY19L4
	Secretory C- mannosylation	metacluster. 45.6	3.00	0.3330	E2F1; E2F1; E2F1; E2F1; E2F1; E2F2; E2F2; E2F2; E2F3; E2F3; E2F3; E2F4; E2F4 (directAn- notation). E2F2; E2F3 (in- ferredBy.Orthology).	2	DPY19L1; DPY19L4

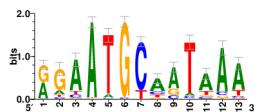
	Secretory C- mannosylatic	transfac. pro.M01253	3.00	0.3330	CNOT3 (directAn- notation).	3	DPY19L1; DPY19L3; DPY19L4
	Elongation.branching cyt. meth.HSF5. NR- CGTTC- TA- GAAYGYN. eDBD. repr		6.01	0.2150	HSF5 (directAn- notation).	8	B3GALT2; B3GALT5; B3GNT2; B3GNT7; B4GALNT3; B4GALNT4; B4GALT2; GCNT2
	Elongation.b tfdimers.MD repr		5.27	0.1920	ELF1; ELF2; ELK1; ELK4; ERF; ERG; ETS1; ETS2; ETV7; FLI1; TCF7L2 (directAn- notation).	7	B3GALT1; B3GALT5; B3GNT2; B4GALNT4; B4GALT1; B4GALT3; GCNT2
	Elongation.branching tf. pairs.ETV2. DLX3. RSCG- GAANNNNNNNTAATKR. CAP. repr		5.16	0.1890	DLX3; ETV2 (directAn- notation).	4	B3GALT2; B4GALNT3; B4GALNT4; B4GALT1
	Elongation.b metacluster. 62.9		5.00	0.1840	POU2F2 (directAn- notation).	4	B3GALT1; B3GNT3; B4GALNT4; B4GALT4

	Elongation.bramahisfc.TCF.	4.85	0.1790	CTCF (directAnnotation).	4	B3GNT2; B4GALNT3; B4GALNT4; GCNT2
	Elongation.btfdimers.MD	4.60	0.1710	GABPA; YY2 (directAnnotation).	4	B3GNT2; B4GALNT3; B4GALNT4; B4GALT1
	Elongation.bramahisfc. pro.M05429	4.59	0.1710	ZNF521 (directAnnotation).	5	B3GALT1; B3GALT5; B3GNT2; B3GNT4; B4GALNT3
	Elongation.bhdpi.TBPL1	4.53	0.1690	TBPL1 (directAnnotation).	4	B3GNT2; B3GNT3; B4GALNT4; B4GALT2
	Elongation.bramahisfc.KAI\$01 HU- MAN.H11MO.2.A	0.1650	0.1650	ZBTB33 (directAnnotation).	4	B3GALT5; B4GALNT3; B4GALT1; GCNT2
	Elongation.btransfac. pro.M01119	4.23	0.1600	ZBTB33 (directAnnotation).	4	B3GALT5; B4GALNT3; B4GALT1; GCNT2
	Elongation.bramahisfc. pro.M06755	4.21	0.1590	ZFPM1 (inferredBy.Orthology).	4	B3GALT1; B3GNT3; B4GALNT3; B4GALT1

	Elongation.b tfdimers.MD	4.06	0.1550	GABPA; PAX4 (directAnnotation).	4	B3GNT2; B3GNT7; GCNT2; GCNT7
	Elongation.b tfthings.MD00456	4.00	0.1530	E2F6; OVOL2 (directAnnotation).	3	B3GNT2; B4GALNT3; B4GALT4
	Elongation.b tfdimers.MD	4.00	0.1530	ELF1; NFIA; NFIC (directAnnotation).	3	B3GNT8; B4GALNT3; B4GALNT4
	Elongation.b branehankcluster. 56.3	3.85	0.1480	HSF2 (directAnnotation).	7	B3GALT5; B3GNT2; B3GNT3; B3GNT7; B4GALNT3; B4GALT2; GCNT2
	Elongation.b transfac. pro.M06292	3.85	0.1480	ZNF766 (directAnnotation).	4	B3GALT1; B4GALNT3; B4GALT1; B4GALT3
	Elongation.b tfthing_tf. pairs.TEAD4. ETV4. RCCG- GAAA- TRCC. CAP	3.84	0.1480	ETV4; TEAD4 (directAnnotation).	4	B3GALT2; B3GNT3; B4GALT1; GCNT2

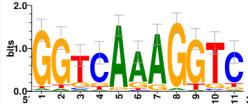
	Elongation.b transfac. pro.M06016	3.84	0.1480	ZNF729 (directAn- notation).	5	B3GALT1; B3GNT3; B4GALNT4; B4GALT3; GCNT2
	Elongation.br findings.MD00296	0.1450		NR3C1; STAT1 (directAn- notation).	5	B3GALT1; B3GNT2; B4GALNT3; B4GALNT4; B4GALT3
	Elongation.b transfac. pro.M05390	3.73	0.1440	TBPL2 (directAn- notation).	3	B3GALT2; B3GALT5; B4GALT3
	Elongation.br transfac. pro.M04864	3.72	0.1440	GATA2 (directAn- notation).	3	B4GALNT3; B4GALNT4; B4GALT1
	Elongation.b tfdimers.MD	3.69	0.1430	NFATC1; NFIA; NFIC (directAn- notation).	3	B3GALT2; B4GALNT4; B4GALT4
	Elongation.br findings.MD00258	0.1430		GATA1; GATA2; GATA3; GATA4; GATA5; GATA6; YY1 (directAn- notation).	3	B3GNT7; B4GALNT4; B4GALT1

	Elongation.b kznf.ZNF334	3.66	0.1420	ZNF334 (directAn- notation).	4	B3GALT5; B3GNT7; B4GALNT3; GCNT2
	Elongation.bramehan- luster. 27.29	3.65	0.1420	ZNF583 (directAn- notation). ZNF583 (in- ferredBy.Orthology).	4	B3GALT1; B3GNT2; GCNT2; GCNT7
	Elongation.b transfac. pro.M02100	3.65	0.1420	MYOD1 (directAn- notation).	4	B3GALT2; B3GALT5; B4GALNT4; B4GALT1
	Elongation.b transfac. pro.M06090	3.63	0.1410	ZNF12 (directAn- notation).	4	B3GALT2; B3GALT5; B3GNT2; GCNT2
	Elongation.b taipale. tf. pairs.POU2F	3.61	0.1410	EOMES; POU2F1 (directAn- notation). NNNTAT- GCAGYGTI CAP. repr	10	B3GALT1; B3GALT2; B3GALT5; B3GNT2; B3GNT7; B4GALT1; B4GALT2; B4GALT3; GCNT2; GCNT7



Elongation.branching tf. 3.60 0.1400 HOXB13;  
pairs.TEAD4 TEAD4  
HOXB13. (directAn-  
RRAATG- notation).  
CAR-  
TAAA.  
CAP. repr

3 B3GNT2;  
B4GALNT4;  
B4GALT4



Elongation.b metacluster. 3.57 0.1390 BCL11B;  
120.1 HNF4A;  
HNF4A;  
HNF4A;  
HNF4A;  
HNF4G;  
NR1H2;  
NR1H2;  
NR1H4;  
NR2C1;  
NR2C2;  
NR2C2;  
NR2C2;  
NR2C2;  
NR2E3;  
NR2F1;  
NR2F1;  
NR2F1;  
NR2F1;  
NR2F1;  
NR2F6;  
NR2F6;  
NR2F6;  
NR2F6;  
PPARA;  
PPARA;  
PPARA;  
PPARD;  
PPARD;  
PPARD;  
PPARD;  
PPARD;  
PPARG;  
PPARG;  
PPARG;  
PPARG;  
PPARG;  
RXRA;  
RXRA;  
RXRA;  
RXRA;  
RXRA;  
RXRB;  
RXRB;  
RXRB;  
RXRG;  
RXRG;  
RXRG;  
RXRG;  
RXRG;  
THRΒ;  
THRΒ  
(directAn-  
notation).  
HNF4A;

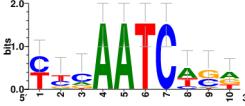
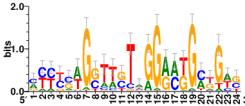
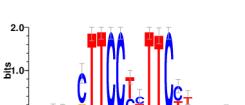
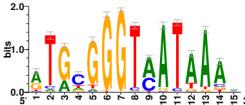
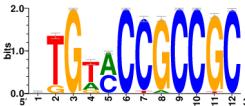
4 B4GALNT3;  
B4GALNT4;  
B4GALT1;  
B4GALT4

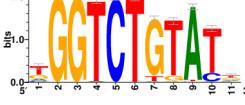
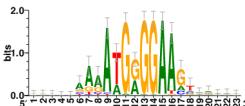
	Elongation.braunschweigTCF.	3.54	0.1380	CTCF (directAn- notation).	3	B3GALT2; B3GALT5; B3GNT9
	Elongation.b kznf.ZNF181	3.53	0.1380	ZNF181 (directAn- notation).	3	B3GALT5; B3GNT7; B4GALT4
	Elongation.b braunschweig tf. pairs.TEAD4.	3.50	0.1370	DLX3; TEAD4 (directAn- notation).	3	B3GNT7; B4GALNT3; B4GALNT4
	Elongation.b kznf.ZNF10.	3.48	0.1370	ZNF10 (directAn- notation).	2	B4GALNT3; B4GALNT4
	Elongation.b braunschweigMA193B145	3.45	0.1360	SREBF2 (directAn- notation).	3	B3GALT1; B3GNT2; B3GNT7
	Elongation.b tfdimers.MD	3.45	0.1360	HOXA13; TFAP2C (directAn- notation).	4	B3GALT5; B3GNT2; B4GALT1; B4GALT4

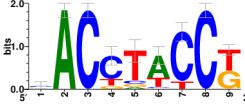
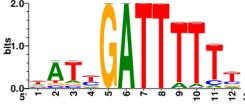
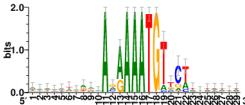
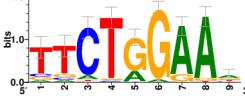
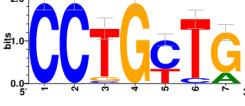
	Elongation.b kznf.ZNF169. Im- beault2017. R.P. RCADE	3.44	0.1350	ZNF169 (directAn- notation).	6	B3GNT2; B3GNT7; B3GNT8; B4GALNT3; B4GALNT4; B4GALT1
	Elongation.b kznf.ZNF695 Im- beault2017. OM. MEME	3.43	0.1350	ZNF695 (directAn- notation).	7	B3GALT1; B3GNT3; B3GNT8; B4GALNT3; B4GALNT4; B4GALT1; GCNT2
	Elongation.b kznf.HOXA7 pro.M01108	3.43	0.1350	HOXA7 (directAn- notation).	3	B3GALT1; B3GNT2; B3GNT9
	Elongation.b metacluster. 9.7	3.41	0.1350	GBX1 (directAn- notation).	2	B3GALT5; B3GNT2
	Elongation.b kznf.XBP1 139.7	3.35	0.1330	XBP1 (directAn- notation). XBP1 (in- ferredBy.Orthology).	3	B3GNT2; B4GALNT3; GCNT2
	Elongation.b transfac. pro.M05721	3.34	0.1320	ZNF235 (directAn- notation).	6	B3GALT2; B3GNT2; B4GALNT4; B4GALT3; GCNT2; GCNT7

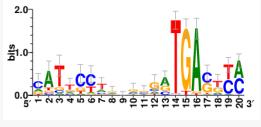
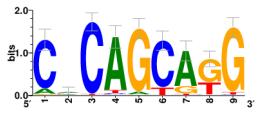
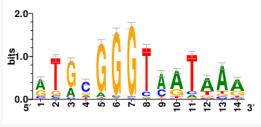
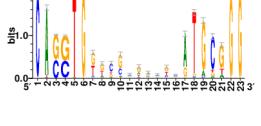
	Elongation.b metacluster. 56.4	3.26	0.1300	HSF1; HSF2; HSF2; HSF4 (directAnnotation).	5	B3GNT2; B3GNT3; B3GNT7; B4GALNT3; B4GALT2
	Elongation.b tfdimers.MD	3.19	0.1280	ZNF189 (directAnnotation).	4	B3GALT2; B3GNT3; B4GALNT4; GCNT2
	Elongation.b branching_tf. pairs.TEAD4.	3.18	0.1270	MYB; STAT6 (directAnnotation).	10	B3GALT1; B3GALT2; B3GALT5; B3GNT2; B3GNT3; B3GNT7; B4GALNT3; B4GALNT4; B4GALT2; GCNT2
	Elongation.b branching_tf. pairs.TEAD4. FOXI1. GGWAT- GYGT- MAACA. CAP. repr	3.18	0.1270	FOXI1; TEAD4 (directAnnotation).	6	B4GALNT3; B4GALNT4; B4GALT2; B4GALT3; B4GALT4; GCNT2

	Elongation.b tfdimers.MD	3.17	0.1270	DBP (directAnnotation).	5	B3GALT1; B3GNT2; B4GALNT3; B4GALT3; GCNT7
	Elongation.brahnmingTRCAT3TCCAG1270	TEAD3	TEAD3 (directAnnotation).	3	B3GNT7; B4GALNT4; B4GALT1	
	Elongation.b metacluster.	3.16	0.1270	NFE2L2 (directAnnotation).	6	B3GALT1; B3GALT2; B3GNT9; B4GALNT3; B4GALNT4; GCNT2
	Elongation.brafdhings.MD003.24	0.1260	NR3C1; SMAD4 (directAnnotation).	2	B3GALT2; B3GNT9	
	Elongation.b kznf.ZNF749	3.13	0.1260	ZNF749 (directAnnotation).	3	B4GALNT3; B4GALNT4; B4GALT2
	Elongation.brahnmingc.	3.09	0.1240	TCF12 (directAnnotation).	3	B3GNT4; B4GALNT3; B4GALT3
	Elongation.b flyfactorsurve	3.06	0.1240	GLIS2 (inferredBy.Ort	3	B3GALT2; B4GALT3; GCNT2

	Elongation.branched.missing. pro.M03825	3.05	0.1230	GFI1B (directAn- notation).	4	B3GALT5; B4GALT2; B4GALT3; B4GALT4
	Elongation.b transfac. pro.M06395	3.02	0.1220	ZNF534 (directAn- notation).	3	B3GALT2; B4GALNT3; B4GALT3
	Elongation.branched.ZNF181. Im- beault2017. RP. RCADE	3.01	0.1220	ZNF181 (directAn- notation).	4	B3GNT3; B3GNT8; B4GALNT4; B4GALT4
	Capping tfdimers.MD	4.99	0.1470	GABPA; STAT6 (directAn- notation).	6	B3GAT2; B4GALNT2; FUT7; ST3GAL5; ST3GAL6; ST6GALNAC1
	Capping taipale. tf. pairs.GCM1. HOXB13. RT- GCGGGTAATAAAN. CAP	4.84	0.1430	GCM1; HOXB13 (directAn- notation).	5	A4GNT; B3GAT2; B4GALNT2; FUT5; ST3GAL4
	Capping transfac. pro.M06163	4.63	0.1390	ZNF121 (directAn- notation).	7	B3GAT1; ST3GAL5; ST6GAL2; ST6GALNAC2; ST6GALNAC3; ST8SIA2; ST8SIA6

	Capping	transfac. pro.M06434	4.49	0.1350	ZNF787 (inferredBy.Orthology).	9	B4GALNT2; FUT4; ST3GAL2; ST3GAL6; ST6GAL2; ST6GALNAC2; ST8SIA1; ST8SIA2; ST8SIA5
	Capping	transfac. pro.M05722	4.21	0.1290	ZNF8 (directAnnotation).	6	A4GNT; B3GAT2; ST3GAL6; ST6GAL2; ST6GALNAC3; ST8SIA6
	Capping	transfac. pro.M06845	4.06	0.1260	ZBTB38 (directAnnotation).	12	B3GAT2; FUT11; FUT5; FUT9; ST3GAL1; ST3GAL5; ST3GAL6; ST6GAL1; ST6GALNAC6; ST8SIA4; ST8SIA5; ST8SIA6
	Capping	tfdimers.MD	3.96	0.1230	ETS1; YY1 (directAnnotation).	8	A4GNT; B3GAT1; B4GALNT2; ST3GAL1; ST3GAL5; ST6GALNAC1; ST6GALNAC3; ST8SIA3

	Capping	kznf.ZNF784. Schmit- ges2016. RCADE	3.91	0.1220	ZNF784 (directAn- notation).	3	B3GAT1; FUT5; FUT6
	Capping	hocomoco.OI HU- MAN.H11M(	3.91	0.1220	ONECUT3 (directAn- notation).	7	B3GAT1; ST3GAL1; ST3GAL6; ST6GAL2; ST6GALNAC3; ST8SIA1; ST8SIA6
	Capping	tfdimers.MD003182	3.82	0.1220	E2F6; NR3C1 (directAn- notation).	7	FUT10; FUT4; ST3GAL2; ST3GAL4; ST6GAL2; ST6GALNAC2; ST6GALNAC3
	Capping	hocomoco.H(	3.86	0.1210	HSF1 (directAn- notation).	6	B3GAT1; FUT1; FUT5; FUT6; ST3GAL3; ST8SIA2
	Capping	transfac. pro.M04912	3.79	0.1190	FOXA1 (directAn- notation).	7	FUT3; FUT5; FUT6; ST3GAL4; ST6GAL2; ST6GALNAC5; ST8SIA5

	Capping	cisbp.M0783 <sup>c</sup>	3.72	0.1180	JUN (directAn- notation).	6	B3GAT1; B3GAT2; B4GALNT2; ST3GAL5; ST3GAL6; ST6GALNAC5
	Capping	metacluster. 80.16	3.62	0.1160	ZIC1 (directAn- notation). ZIC2 (in- ferredBy.Orthology).	5	FUT3; FUT5; FUT6; ST3GAL5; ST6GALNAC6
	Capping	taipale. tf. pairs.GCM1.	3.60	0.1150	GCM1; HOXA13 (directAn- notation). NATAAA. CAP	8	A4GNT; B3GAT2; B4GALNT2; FUT5; ST3GAL4; ST6GALNAC1; ST6GALNAC5; ST8SIA6
	Capping	taipale. tf. pairs.GCM1.	3.51	0.1130	FIGLA; GCM1 (directAn- notation). CAGCT- GNNNNNNNNNNNT- GCGGG. CAP	12	A4GNT; B3GAT1; B3GAT2; FUT6; FUT9; ST3GAL2; ST3GAL5; ST3GAL6; ST6GAL1; ST6GAL2; ST6GALNAC1; ST8SIA2

	Capping	nitta.so. TATGCC20f KG. NGAT- ACG- TATCN. m1. c3	3.50	0.1130	SIX1 (inferredBy.Org)	11	ABO; FUT2; FUT9; ST3GAL4; ST6GAL1; ST6GAL2; ST6GALNAC1; ST6GALNAC3; ST6GALNAC4; ST8SIA2; ST8SIA4
	Capping	metacluster. 168.5	3.47	0.1120	ZNF768; ZNF768 (directAnnotation).	16	A4GNT; B3GAT1; B3GAT2; FUT4; FUT5; FUT6; FUT7; ST3GAL2; ST3GAL4; ST3GAL5; ST3GAL6; ST6GAL2; ST6GALNAC1; ST6GALNAC4; ST6GALNAC6; ST8SIA1
	Capping	transfac. pro.M06543	3.45	0.1120	ZNF418 (directAnnotation).	4	FUT9; ST3GAL4; ST6GALNAC6; ST8SIA2
	Capping	transfac. pro.M12598	3.43	0.1110	E2F3 (directAnnotation).	4	B3GAT1; FUT9; ST3GAL6; ST6GAL2

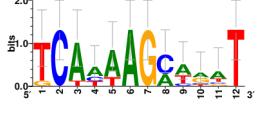
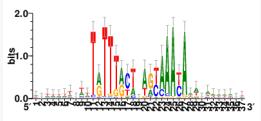
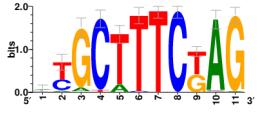
	Capping	metacluster. 33.3	3.41 0.1110	ZNF134; ZNF174 (directAn- notation).	3	FUT3; FUT5; FUT6
	Capping	jaspar.MA0884B24	0.1090	DUXA (directAn- notation).	4	ABO; ST6GAL1; ST8SIA1; ST8SIA3
	Capping	transfac. pub- lic.M00413	3.31 0.1080	ZEB1 (directAn- notation).	5	B3GAT1; B3GAT2; FUT2; FUT6; FUT9
	Capping	transfac. pro.M05699	3.30 0.1080	ZNF816 (directAn- notation).	7	ST3GAL4; ST6GAL1; ST6GALNAC3; ST6GALNAC5; ST6GALNAC6; ST8SIA2; ST8SIA3
	Capping	kznf.CTCF. Transfac.8. Transfac	3.26 0.1070	CTCF (directAn- notation).	10	B3GAT2; FUT1; FUT3; FUT4; FUT5; FUT6; FUT9; ST3GAL2; ST3GAL5; ST6GAL2

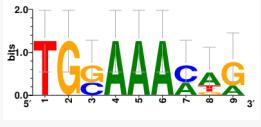
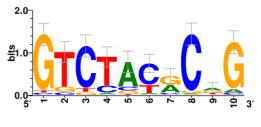
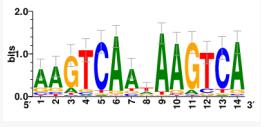
	Capping	taipale. tf. pairs.GCM2. HOXA13. RTR-CGGGTAATAAAN. CAP. repr	3.26	0.1070	GCM2; HOXA13 (directAnnotation).	4	A4GNT; B4GALNT2; ST3GAL4; ST8SIA6
	Capping	tfdimers.MD	3.22	0.1060	STAT6; ZNF354C (directAnnotation).	4	B3GAT1; B4GALNT2; FUT9; ST6GAL2
	Capping	metacluster. 20.7	3.21	0.1060	EN2; EN2 (directAnnotation).	6	B3GAT2; ST3GAL4; ST3GAL6; ST6GAL2; ST8SIA3; ST8SIA6
	Capping	taipale. tf. pairs.TEAD4. PITX1. RCATWC-NNNNG-GATTA. CAP. repr	3.19	0.1060	PITX1; TEAD4 (directAnnotation).	4	B3GAT1; ST3GAL4; ST6GALNAC6; ST8SIA2
	Capping	jaspar.MA0442B12	0.1040	SOX10 (directAnnotation).	5	A4GNT; ST3GAL2; ST3GAL4; ST6GAL1; ST8SIA4	

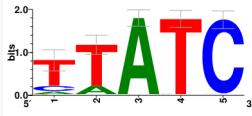
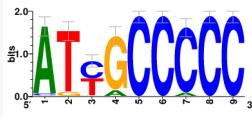
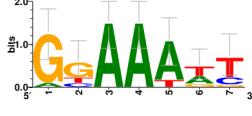
	Capping	transfac. pro.M06577	3.12	0.1040	ZNF594 (directAn- notation).	9	B3GAT2; B4GALNT2; FUT10; FUT4; ST3GAL1; ST3GAL5; ST3GAL6; ST6GALNAC5; ST8SIA6
	Capping	kznf.ZBTB12. Schmit- ges2016. RCADE	3.11	0.1040	ZBTB12 (directAn- notation).	6	B3GAT1; FUT1; FUT10; ST6GALNAC5; ST8SIA2; ST8SIA5
	Capping	metacluster. 122.2	3.09	0.1030	ZBTB43; ZBTB43 (directAn- notation).	5	FUT4; ST3GAL4; ST6GAL1; ST6GAL2; ST8SIA5
	Capping	transfac. pro.M03565	3.09	0.1030	SNAI2 (directAn- notation).	5	FUT3; FUT5; FUT6; FUT9; ST6GAL2
	Capping	taipale. tf. pairs.GCM1. HOXB13. RTRNGGG] CAP	3.09	0.1030	GCM1; HOXB13 (directAn- notation).	11	A4GNT; B3GAT2; B4GALNT2; FUT3; FUT5; ST3GAL4; ST3GAL6; ST6GALNAC3; ST6GALNAC5; ST6GALNAC6; ST8SIA6

	Capping	taipale. cyt. meth.LHX9. CYAAT- TAR. eDBD	3.07	0.1030	LHX9 (directAn- notation).	7	FUT1; ST3GAL4; ST3GAL6; ST6GAL2; ST8SIA1; ST8SIA3; ST8SIA6
	Capping	transfac. pro.M05738	3.07	0.1030	ZNF470 (directAn- notation).	4	B3GAT1; FUT9; ST3GAL5; ST6GALNAC6
	Capping	metacluster. 134.2	3.05	0.1020	FOXA1; FOXB1; FOXJ2; FOXJ2 (directAn- notation). FOXA2 (in- ferredBy.Orthology).	7	ABO; FUT2; ST3GAL3; ST6GAL1; ST8SIA1; ST8SIA4; ST8SIA5
	Capping	transfac. pro.M01185	3.04	0.1020	BCL6 (directAn- notation).	3	ST6GAL2; ST6GALNAC3; ST8SIA2
	Capping	metacluster. 109.1	3.03	0.1020	NFX1 (in- ferredBy.Orthology).	6	B3GAT2; ST3GAL4; ST6GAL1; ST6GAL2; ST6GALNAC4; ST6GALNAC6
	Capping	metacluster. 134.5	3.02	0.1020	ZNF184 (directAn- notation).	5	FUT3; FUT4; FUT9; ST3GAL1; ST3GAL4

	Capping	hocomoco.PAX302 MOUSE.H11MO.0.D	0.1020	PAX3 (inferredBy.Orthology).	6	B3GAT1; ST3GAL1; ST3GAL4; ST6GAL1; ST6GAL2; ST6GALNAC2
	Sulfotransfer cisbp.M0021	3.76	0.1430	SOX13 (inferredBy.Orthology).	9	CHST1; CHST8; GLCE; HS3ST2; HS3ST5; HS3ST6; HS6ST2; TPST1; TPST2
	Sulfotransfer transfac. pro.M06569	3.65	0.1400	ZNF775 (directAnnotation).	7	CHST2; CHST3; CHST8; CHST9; DSEL; GAL3ST1; HS3ST3A1
	Sulfotransfer taipale. tf pairs.GCM1.	3.44	0.1340	ELK1; GCM1 (directAnnotation).	7	CHST7; CHST9; DSE; DSEL; GLCE; NDST3; UST
	Sulfotransfer metacluster. 155.11	3.44	0.1340	SPZ1 (directAnnotation).	7	CHST9; DSE; GLCE; HS3ST6; HS6ST3; NDST3; UST

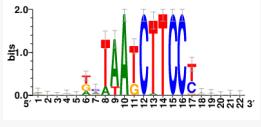
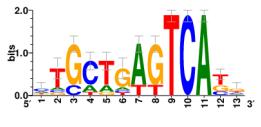
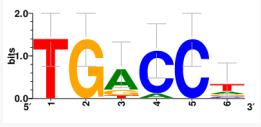
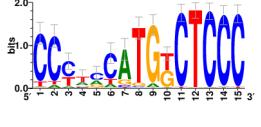
	Sulfotransferase transfac. pro.M05411	3.44	0.1340	ZNF784 (inferredBy.Org)	9	CHST5; DSE; DSEL; GAL3ST2; GLCE; HS3ST3A1; HS3ST4; HS3ST5; HS6ST3
	Sulfotransferase NME1	3.34	0.1320	NME1 (directAnnotation).	13	CHST10; CHST13; CHST14; CHST15; CHST8; DSE; GAL3ST2; GLCE; HS3ST3A1; HS6ST1; HS6ST3; TPST1; UST
	Sulfotransferase tfdimers.MD	3.25	0.1290	FOXA1; FOXA2; FOXA3 (directAnnotation).	8	CHST1; CHST10; CHST12; CHST15; CHST8; GAL3ST2; GAL3ST4; HS6ST1
	Sulfotransferase metacluster. 93.4	3.24	0.1290	BCL6B (directAnnotation).	6	CHST4; CHST8; DSEL; HS3ST6; HS6ST1; HS6ST3

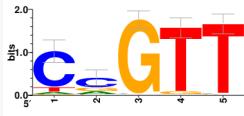
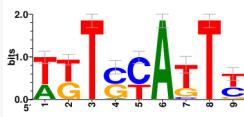
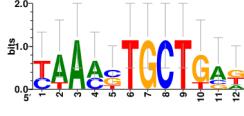
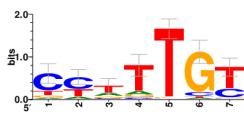
	Sulfotransferase	hdpi.TFE3	3.22	0.1280	TFE3 (directAn- notation).	6	CHST15; CHST2; CHST8; GAL3ST2; GLCE; HS3ST3A1
	Sulfotransferase	metacluster. 172.26	3.19	0.1280	ZSCAN29 (directAn- notation).	7	CHST8; CHST9; DSEL; GLCE; HS3ST6; HS6ST3; NDST3
	Sulfotransferase	metacluster. 140.7	3.18	0.1270	NR2E1; NR2E3 (directAn- notation). NR2E1; NR2E1; NR2E1 (in- ferredBy.Ort	5	CHST14; CHST8; DSE; GAL3ST2; HS6ST1
	Sulfotransferase	metacluster. 79.30	3.16	0.1270	ZNF341; ZNF589 (directAn- notation).	8	CHST6; CHST9; DSE; GLCE; HS3ST6; HS6ST3; NDST3; UST

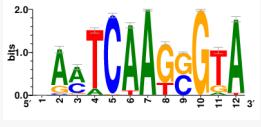
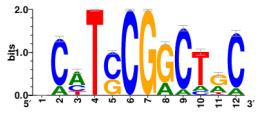
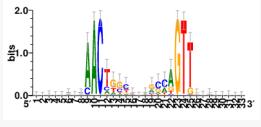
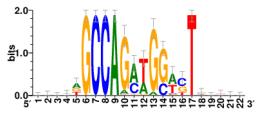
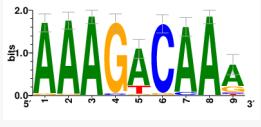
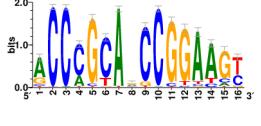
	Sulfotransfer metacluster. 117.2	3.13	0.1260	GATA3; GATA3; GATA3; GATA5; GATA5; GATA5; GATA5; GATA5; GATA6; GATA6 (directAn- notation).	9	CHST12; CHST15; CHST8; DSEL; GAL3ST1; HS3ST1; HS6ST1; HS6ST2; NDST4
	Sulfotransfer metacluster. pro.M06357	3.08	0.1250	ZNF629 (in- ferredBy.Orthology).	7	CHST11; CHST13; CHST14; CHST3; CHST7; DSE; NDST4
	Sulfotransfer metacluster. 159.8	3.08	0.1250	ZNF770 (directAn- notation). ZNF770 (in- ferredBy.Ort	6	CHST2; CHST9; GLCE; HS3ST4; HS6ST3; NDST3
	Sulfotransfer metacluster. pro.M00750	3.02	0.1230	HMGA1; HMGA2 (directAn- notation).	7	CHST15; CHST2; CHST8; CHST9; GAL3ST2; HS3ST3B1; NDST4
	Sulfotransfer metacluster. pro.M06174	3.00	0.1230	ZNF93 (directAn- notation).	5	CHST8; GLCE; HS6ST1; NDST3; UST

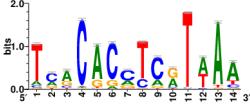
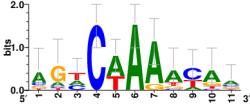
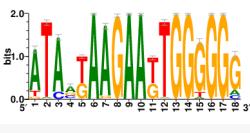
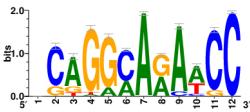
	Hydrolase	metacluster. 65.6	6.87 0.3510	SOX8 (directAn- notation).	3	FUCA2; NEU3; NEU4
	Hydrolase	transfac. pro.M06362	6.65 0.3410	ZNF730 (directAn- notation).	3	FUCA1; FUCA2; NEU2
	Hydrolase	taipale. tf. pairs.ETV2. NHLH1. NGCAGCT- GCCG- GAWRYN. CAP. repr	6.14 0.3160	ETV2; NHLH1 (directAn- notation).	4	FUCA1; FUCA2; NEU2; NEU3
	Hydrolase	transfac. pro.M06335	5.87 0.3030	ZNF343 (directAn- notation).	2	FUCA1; FUCA2
	Hydrolase	swissregulon.hs5MYBL2030	5.87 0.3030	MYBL2 (directAn- notation).	2	NEU3; NEU4
	Hydrolase	taipale.GME DBD. WR- CGAAC- CACGYN. repr	5.83 0.3020	GMEB2 (directAn- notation).	3	FUCA2; NEU1; NEU4
	Hydrolase	transfac. pro.M05995	5.77 0.2990	ZNF180 (directAn- notation).	2	NEU3; NEU4



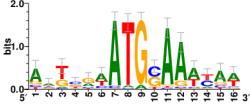
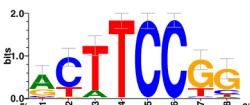
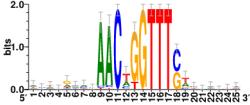
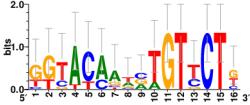
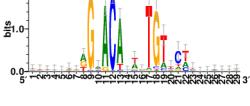
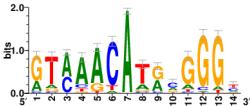
	Hydrolase	tfdimers.MD	5.33	0.2770	GABPA; PITX3 (directAn- notation).	4	FUCA1; FUCA2; NEU3; NEU4
	Hydrolase	metacluster. 22.38	5.32	0.2770	NFE2L2 (directAn- notation). MAFK (in- ferredBy.Orthology).	2	FUCA2; NEU4
	Hydrolase	transfac. pro.M03790	5.29	0.2750	NR1H4 (directAn- notation).	2	FUCA2; NEU4
	Hydrolase	metacluster. 155.33	5.22	0.2720	ZNF16; ZNF816 (directAn- notation).	2	FUCA1; NEU4
	Hydrolase	kznf.PRDM1 modEN- CODE.1. ChIP-seq	5.20	0.2710	PRDM1 (directAn- notation).	2	NEU3; NEU4
	Hydrolase	homer.GGCVG\$T\$R.	0.2700	0.2700	MYB (in- ferredBy.Orthology).	2	NEU3; NEU4

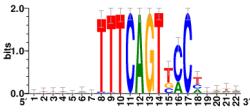
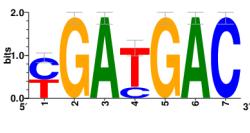
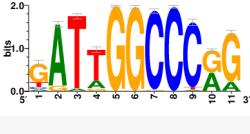
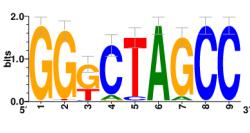
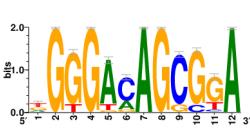
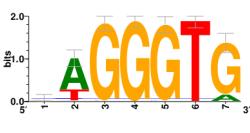
	Hydrolase	metacluster. 113.4	5.15	0.2690	MYB; MYB; MYBL1; MYBL2 (directAn- notation). MYB; MYB; MYBL1; MYBL2 (in- ferredBy.Ort)	2	NEU3; NEU4
	Hydrolase	hocomoco.TH4.89	4.89	0.2560	THRA (in- ferredBy.Orthology).	2	FUCA2; NEU4
	Hydrolase	kznf.ZNF620 Im- beault2017. RP. RCADE	4.77	0.2500	ZNF620 (directAn- notation).	2	FUCA2; NEU4
	Hydrolase	transfac. pro.M07337	4.75	0.2500	BANP (directAn- notation).	2	FUCA1; NEU4
	Hydrolase	transfac. pro.M05705	4.70	0.2470	ZNF239 (in- ferredBy.Ort)	2	FUCA1; NEU4
	Hydrolase	metacluster. 16.1	4.68	0.2460	SOX9; ZIK1; ZIK1; ZNF782 (directAn- notation). SOX9 (in- ferredBy.Orthology).	2	NEU2; NEU4

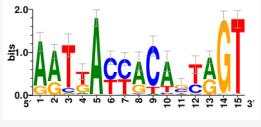
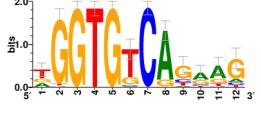
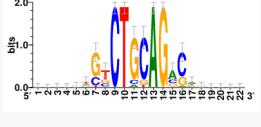
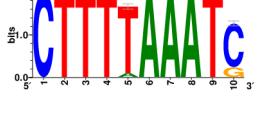
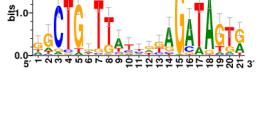
	Hydrolase	transfac. pro.M06089	4.66	0.2450	ZNF26 (directAn- notation).	2	FUCA2; NEU1
	Hydrolase	transfac. pro.M06156	4.58	0.2410	ZNF75D (directAn- notation).	2	FUCA1; FUCA2
	Hydrolase	tfdimers.MD	4.55	0.2400	MYB (directAn- notation).	3	NEU1; NEU3; NEU4
	Hydrolase	tfdimers.MD00547	4.47	0.2390	FOXM1; TFAP2A (directAn- notation).	2	FUCA1; NEU2
	Hydrolase	kznf.ZNF197 Im- beault2017. OM. RCADE	4.48	0.2370	ZNF197 (directAn- notation).	2	FUCA2; NEU1
	Hydrolase	taipale. tf. pairs.GCM1. ELK3. ACCCG- CANCCG- GAAGN. CAP. repr	4.43	0.2340	ELK3; GCM1 (directAn- notation).	2	FUCA1; FUCA2
	Hydrolase	transfac. pro.M06782	4.36	0.2310	ZNF225 (directAn- notation).	2	FUCA2; NEU3

	Hydrolase	taipale. tf. pairs.HOXD12.	4.24	0.2250	EOMES; HOXD12 (directAn- notation).	2	FUCA2; NEU2
	Hydrolase	transfac. pro.M06202	4.14	0.2200	ZXDB (directAn- notation).	3	FUCA2; NEU3; NEU4
	Hydrolase	transfac. pro.M08811	4.10	0.2180	FOXL2 (directAn- notation).	2	FUCA2; NEU4
	Hydrolase	transfac. pro.M06901	4.06	0.2160	ZNF484 (directAn- notation).	2	FUCA1; NEU4
	Hydrolase	homer.TRAGGTCA. THRb	0.2140		THRb (in- ferredBy.Orthology).	2	FUCA2; NEU4
	Hydrolase	hocomoco.M HU- MAN.H11M(	3.97	0.2120	MLX (directAn- notation).	2	FUCA1; NEU1
	Hydrolase	transfac. pro.M06077	3.92	0.2090	ZNF716 (directAn- notation).	2	FUCA2; NEU4

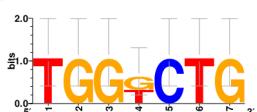
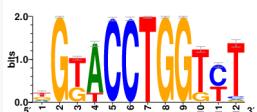
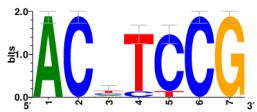
	Hydrolase	taipale. tf. pairs.FOXO1 SPDEF. WMSCG- GAT- GTKNW. CAP. repr	3.84	0.2060	FOXO1; SPDEF (directAnnotation).	2	FUCA2; NEU4
	Hydrolase	kznf.CTCF. Transfac.6. Transfac	3.83	0.2050	CTCF (directAnnotation).	2	FUCA1; NEU1
	Hydrolase	transfac. pro.M05933	3.71	0.1990	ZNF552 (directAnnotation).	4	FUCA2; NEU1; NEU2; NEU3
	Hydrolase	jaspar.MA1483268	0.1980	ELF2 (directAnnotation).		2	FUCA2; NEU4
	Hydrolase	taipale. tf. pairs.HOX13 MEIS1. NNNR- TAAANCT- GTN. ChIP. Exo	3.66	0.1970	MEIS1 (directAnnotation).	3	FUCA2; NEU3; NEU4
	Hydrolase	transfac. pro.M04699	3.62	0.1950	MAFK (directAnnotation).	2	NEU3; NEU4
	Hydrolase	metacluster. 172.14	3.60	0.1940	ZFX; ZFY (directAnnotation).	2	FUCA2; NEU4

	Hydrolase	hocomoco.PO2F60 HU-MAN.H11MO.0.C	0.1940	POU2F1 (directAnnotation).	2	FUCA1; NEU4
	Hydrolase	metacluster. 166.2	3.57	0.1920 ELK4; ETS1; ETS1; ETV1; ETV3; ETV4; ETV5; ETV7 (directAnnotation). GABPA (inferredBy.Org)	3	FUCA1; FUCA2; NEU4
	Hydrolase	tfdimers.MD00296	0.1910	MYB; ZEB1 (directAnnotation).	2	NEU3; NEU4
	Hydrolase	transfac. public.M00205	3.51	0.1900 NR3C1 (directAnnotation).	2	NEU2; NEU4
	Hydrolase	tfdimers.MD00320	0.1870	NR3C1 (directAnnotation).	4	FUCA1; FUCA2; NEU3; NEU4
	Hydrolase	taipale. tf. pairs.GCM1. FOXI1. RTMAA- CA- TRNGGGN. CAP. repr	3.42	0.1850 FOXI1; GCM1 (directAnnotation).	2	FUCA1; FUCA2

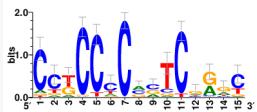
	Hydrolase	taipale. tf. pairs.HOXA3.	3.42	0.1850	EOMES; HOXA3 (directAnnotation).	3	FUCA2; NEU2; NEU4
	Hydrolase	tdimers.MD	3.39	0.1840	E2F1; LTF (directAnnotation).	2	NEU3; NEU4
	Hydrolase	kznf.ZNF669.	3.38	0.1830	ZNF669 (directAnnotation).	2	NEU2; NEU4
	Hydrolase	transfac. pro.M05403	3.31	0.1800	ADNP2 (inferredBy.Ort)	5	FUCA1; FUCA2; NEU2; NEU3; NEU4
	Hydrolase	kznf.ZKSCAN3.	3.29	0.1790	ZKSCAN3 (directAnnotation).	2	NEU2; NEU3
	Hydrolase	transfac. pro.M06226	3.26	0.1780	ZNF460 (directAnnotation).	2	NEU1; NEU4
	Hydrolase	metacluster. 66.10	3.25	0.1770	ZXDA (directAnnotation).	3	FUCA2; NEU3; NEU4

	Hydrolase	metacluster. 112.1	3.24	0.1770	ZNF433 (directAn- notation).	4	FUCA1; FUCA2; NEU3; NEU4
	Hydrolase	metacluster. 158.2	3.16	0.1730	ZNF789; ZNF789 (directAn- notation).	2	FUCA2; NEU3
	Hydrolase	tdimers.MD	3.15	0.1730	SMAD4 (directAn- notation).	2	FUCA2; NEU4
	Hydrolase	transfac. pro.M05390	3.11	0.1710	TBPL2 (directAn- notation).	3	FUCA1; FUCA2; NEU1
	Hydrolase	transfac. pro.M06366	3.09	0.1690	ZNF530 (directAn- notation).	2	FUCA1; NEU2
	Hydrolase	kznf.ZNF792. Im- beault2017. RP. ChIP-seq	3.06	0.1680	ZNF792 (directAn- notation).	2	NEU3; NEU4
	Hydrolase	transfac. pro.M05449	3.04	0.1670	ZNF414 (in- ferredBy.Ort)	2	FUCA2; NEU1

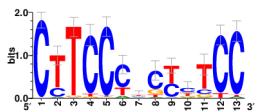
	Hydrolase	taipale. tf. pairs.RORB. AWNTAG- GTCAT- GACC- TANWT. HT	3.04	0.1670	RORB (directAn- notation).	3	FUCA1; NEU2; NEU3
	Hydrolase	homer.WDN ZNF416	3.03	0.1670	ZNF416 (directAn- notation).	1	NEU4
	Hydrolase	kznf.ZNF467. Schmitt- ges2016. RCADE	3.03	0.1670	ZNF467 (directAn- notation).	1	NEU4
	Hydrolase	swissregulon.	3.03	0.1670	GTF2I (directAn- notation).	1	NEU4
	Hydrolase	tfdimers.MD0035B	0.1670		IRF8; RFX1; RFX2; RFX3; RFX4; RFX5; RFXANK; RFXAP (directAn- notation).	1	NEU4
	Hydrolase	transfac. pro.M01776	3.03	0.1670	NR2C2 (directAn- notation).	1	NEU4



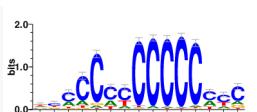
Hydrolase hdpi.SMAD3 3.03 0.1670 SMAD3  
(directAnnotation).



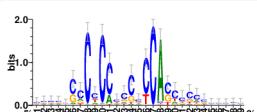
Hydrolase metacluster. 3.03 0.1670 ZNF304;  
133.1 ZNF304;  
ZSCAN22  
(directAnnotation).



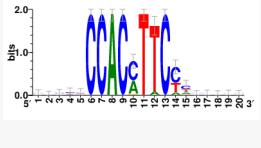
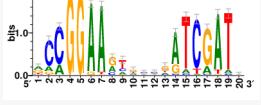
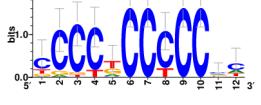
Hydrolase metacluster. 3.03 0.1670 ZNF132;  
35.8 ZNF132  
(directAn-  
notation).

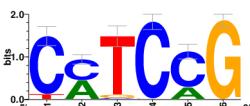
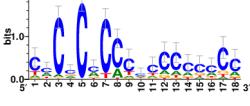
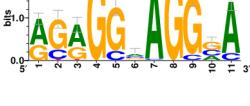


Hydrolase swissregulon. 3.03 0.1670 ZNF281  
(directAnnotation).



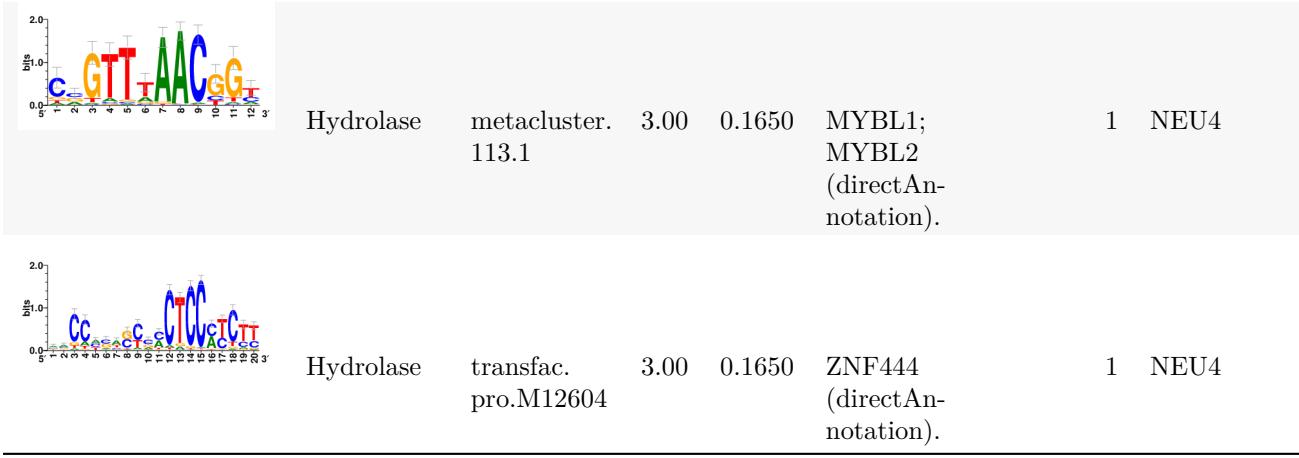
Hydrolase tfdimers.MD003403 0.1670 SREBF2;  
WT1  
(directAn-  
notation).

	Hydrolase	tfdimers.MD	3.03	0.1670	STAT6; ZNF354C (directAn- notation).	1	NEU4
	Hydrolase	swissregulon.hsPAX5.1660	3.03	0.1660	PAX5 (directAn- notation).	1	NEU4
	Hydrolase	taipale. tf. pairs.ERF. ONE- CUT2. RSCG- GAANNNN GATN. CAP	3.02	0.1660	ERF; ONECUT2 (directAn- notation).	1	NEU4
	Hydrolase	transfac. pro.M07397	3.02	0.1660	ZNF148 (directAn- notation).	1	NEU4
	Hydrolase	dbtfbs.ZNF4 HEK293. ENCSR477O merged. N1	3.02	0.1660	ZNF423 (directAn- notation).	1	NEU4
	Hydrolase	transfac. pro.M01122	3.02	0.1660	ZNF219 (directAn- notation).	1	NEU4
	Hydrolase	transfac. pro.M06137	3.02	0.1660	ZNF250 (directAn- notation).	1	NEU4

	Hydrolase	kznf.ZNF267. Im-beault2017. OM. RCADE	3.02	0.1660	ZNF267 (directAnnotation).	1	NEU4
	Hydrolase	metacluster. 135.8	3.02	0.1660	ZNF516; ZNF536 (inferredBy.Org)	1	NEU4
	Hydrolase	metacluster. 3.2	3.02	0.1660	KLF8; TBX15 (directAnnotation).	1	NEU4
	Hydrolase	transfac. pro.M06149	3.02	0.1660	ZNF132 (directAnnotation).	2	FUCA2; NEU2
	Hydrolase	kznf.ZNF540. Im-beault2017. RP. ChIP-seq	3.02	0.1660	ZNF540 (directAnnotation).	1	NEU4
	Hydrolase	metacluster. 80.9	3.02	0.1660	ZIC2 (directAnnotation).	1	NEU4
	Hydrolase	transfac. pro.M02023	3.02	0.1660	MAZ (directAnnotation).	1	NEU4

	Hydrolase	hocomoco.K_HUMAN.H11MO.0.C	3.01	0.1660	ZBTB33 (directAnnotation).	1	NEU4
	Hydrolase	hocomoco.PRD3101_MOUSE.H11MO.0.B	3.01	0.1660	PRDM16 (inferredBy.Orthology).	1	NEU4
	Hydrolase	metacluster.198.1	3.01	0.1660	ZNF439 (directAnnotation).	3	FUCA2; NEU3; NEU4
	Hydrolase	transfac.pro.M04881	3.01	0.1660	ESR1 (directAnnotation).	1	NEU4
	Hydrolase	transfac.pro.M06580	3.01	0.1660	ZNF560 (directAnnotation).	1	FUCA2
	Hydrolase	cisbp.M08220	3.01	0.1660	HNF4A (directAnnotation).	1	NEU4
	Hydrolase	kznf.ZNF557_Im-beault2017.OM.MEME	3.01	0.1660	ZNF557 (directAnnotation).	1	NEU4
	Hydrolase	hocomoco.HAN3D1_HUMAN.H11MO.1.D	3.01	0.1660	HAND1 (directAnnotation).	1	NEU4

	Hydrolase	hocomoco.SF HU- MAN.H11M(	3.01	0.1660	SREBF2 (directAn- notation).	1	NEU4
	Hydrolase	kznf.IKZF3. Schmit- ges2016. RCADE	3.01	0.1660	IKZF3 (directAn- notation).	1	NEU4
	Hydrolase	metacluster. 24.11	3.01	0.1660	ZSCAN22; ZSCAN22 (directAn- notation).	1	NEU4
	Hydrolase	transfac. pro.M01119	3.01	0.1660	ZBTB33 (directAn- notation).	1	NEU4
	Hydrolase	transfac. pro.M06457	3.01	0.1660	ZNF451 (in- ferredBy.Ort	1	NEU4
	Hydrolase	hdpi.HIP2	3.00	0.1650	UBE2K (directAn- notation).	1	NEU4
	Hydrolase	transfac. pro.M05742	3.00	0.1650	ZNF57 (directAn- notation).	1	NEU4
	Hydrolase	jaspar.MA19653100	0.1650	SP5 (directAn- notation).		1	NEU4



geneSet: The glycosylation pathway to which the glycosyltransferes belong.

Motif: ID of the motif.

NES: Normalized enrichment score of the motif in the gene-set. It was calculated based on the AUC distribution of all the motifs for the gene-set [(x-mean)/sd].

AUC: area under the curve.

TF.highConf: Transcription factors with high confident.

nEnrGenes: The number of genes that are highly ranked for the given motif.

enrichedGenes: hgnc\_symbol of genes that are highly ranked for the given motif.