

**ANNEX 04** - Transcription factors identified from differentially expressed protein genes for litter size (group 4), through an input file in Fasta format

;TFM Explorer

;Date : Mon Nov 8 18:20:04 2021

;Scanned location : -3000:300

;Scanned sequences : None (10 sequences)

;Scanned matrices : (130 matrices)

;Parameters : minsize= 30, maxsize= 1500, ratio=3.0, top=25

;

; headers

; 1 rank window rank

; 2 matrix matrix name

; 3 tf transcription factor name

; 4 info information of content of the matrix

; 5 gc gc content of the matrix (G+C)%

; 6 location location of the window (relatively to TSS)

; 7 pvalue pvalue of the window

1 MA0136.1 ELF5 8.69309550562 0.429292928841 -1540:-1108 4.59450784095e-16

list of hits

CDKAL1	-1145	-1136	+	6.63	TAGATCCTT
ENOX1 -1537	-1528	+	6.82	TTTTTCCTT	
GRID2 -1313	-1304	-	7.93	AAGGAAGTG	
LDLRAD3	-1540	-1531	-	7.20	CAGGATATA
PALB2 -1526	-1517	+	6.20	AAGTTCCTG	
PALB2 -1322	-1313	+	6.37	AACTTCCAT	
RMND1-1489	-1480	+	6.47	TAATTCCTT	
SUGCT -1345	-1336	+	6.43	TATTTCCCT	
UBFD1 -1534	-1525	-	6.20	CAGGAACCTT	
UBFD1 -1479	-1470	-	6.49	AAGGAAGGA	
UBFD1 -1467	-1458	-	6.98	AAGGAAGAA	
UBFD1 -1447	-1438	-	6.98	AAGGAAGAA	
UBFD1 -1435	-1426	-	6.98	AAGGAAGAA	
UBFD1 -1423	-1414	-	6.49	AAGGAAGGA	
UBFD1 -1403	-1394	-	6.49	AAGGAAGGA	
UBFD1 -1387	-1378	-	6.98	AAGGAAGAA	
UBFD1 -1375	-1366	-	6.98	AAGGAAGAA	

UBFD1	-1359	-1350	-	6.49	AAGGAAGGA
UBFD1	-1343	-1334	-	6.49	AAGGAAGGA
UBFD1	-1331	-1322	-	6.49	AAGGAAGGA
UBFD1	-1319	-1310	-	6.49	AAGGAAGGA
UBFD1	-1307	-1298	-	6.49	AAGGAAGGA
UBFD1	-1296	-1287	-	6.98	AAGGAAGAA
UBFD1	-1276	-1267	-	6.98	AAGGAAGAA
UBFD1	-1264	-1255	-	6.82	AAGGAAAAA
UBFD1	-1248	-1239	-	6.49	AAGGAAGGA
UBFD1	-1236	-1227	-	6.98	AAGGAAGAA
UBFD1	-1220	-1211	-	6.49	AAGGAAGGA
UBFD1	-1208	-1199	-	6.49	AAGGAAGGA
UBFD1	-1188	-1179	-	6.49	AAGGAAGGA
UBFD1	-1176	-1167	-	6.49	AAGGAAGGA
UBFD1	-1160	-1151	-	6.98	AAGGAAGAA
UBFD1	-1148	-1139	-	6.98	AAGGAAGAA
UBFD1	-1132	-1123	-	6.49	AAGGAAGGA
UBFD1	-1120	-1111	-	6.98	AAGGAAGAA
UBFD1	-1108	-1099	-	6.98	AAGGAAGAA

2 MA0149.1 EWSR1-FLI1 32.8714828257 0.554497355492 -1505:-1067 1.92915582195e-09

list of hits

CDKAL1	-1496	-1478	-	-7.53	CTTTCCTCTCCAGCTTTC
CDKAL1	-1423	-1405	-	-9.02	CATTTCTTGGGCCCTCC
CUL9	-1468	-1450	+	-7.27	TGAAGTGAGCAGGGTGGG
CUL9	-1440	-1422	+	-6.19	GGGTGAGAGGCAGGACTG
ENOX1	-1496	-1478	+	-7.82	TCATGAAATGAATGAAGG
GRID2	-1383	-1365	+	-7.47	AAAAAAAAATAAAGGAATG
GRID2	-1315	-1297	+	-4.55	AGAAGGAAGTGATGAATT
LDLRAD3	-1243	-1225	-	-9.53	TCTGCCAGCTTAGCTTCC
PALB2	-1101	-1083	+	-7.93	GGAAAGCAAGCAGAAATC
RMND1	-1480	-1462	+	-1.67	GGAAGAAGAGAAAGAATA
SUGCT	-1356	-1338	-	-1.15	TTTTCTTCAATATTTCC
SUGCT	-1181	-1163	-	-4.97	ACTCCCTGCATCCCTCTC
UBFD1	-1505	-1487	+	-6.77	CCAAGAAAGAAAGAAAGA
UBFD1	-1485	-1467	+	16.72	GAAAGAAAGGAAGGAAGG

UBFD1	-1466	-1448	+	-9.15	AGGAAGAAAGGAAGAAAG
UBFD1	-1445	-1427	+	11.17	GGAAGAAAGAAAGGAAGA
UBFD1	-1426	-1408	+	-8.55	AGAAAGGAAGGAAGAAAG
UBFD1	-1405	-1387	+	17.14	GAAAGGAAGGAAGGAAGA
UBFD1	-1385	-1367	+	17.15	GGAAGAAAGGAAGGAAGA
UBFD1	-1365	-1347	+	16.72	GAAAGAAAGGAAGGAAGG
UBFD1	-1345	-1327	+	20.53	GAAAGGAAGGAAGGAAGG
UBFD1	-1325	-1307	+	20.54	GGAAGAAAGGAAGGAAGG
UBFD1	-1306	-1288	+	-3.67	AGGAAGGAAGAAGGAAGA
UBFD1	-1286	-1268	+	11.17	GGAAGAAAGAAAGGAAGA
UBFD1	-1266	-1248	+	5.18	GAAAGGAAAAAAGGAAGA
UBFD1	-1246	-1228	+	20.96	GGAAGGAAGGAAGGAAGA
UBFD1	-1226	-1208	+	16.72	GAAAGAAAGGAAGGAAGG
UBFD1	-1206	-1188	+	14.98	GGAAGGAAGGAAGAAAGA
UBFD1	-1186	-1168	+	24.35	GGAAGGAAGGAAGGAAGG
UBFD1	-1167	-1149	+	-9.15	AGGAAGAAAGGAAGAAAG
UBFD1	-1147	-1129	+	-5.36	AGGAAGAAAGAAAGAAAG
UBFD1	-1126	-1108	+	14.98	GGAAGGAAGGAAGAAAGA
UBFD1	-1106	-1088	+	5.65	GGAAGAAAAGAAAGAAAG
UBFD1	-1088	-1070	+	-4.14	AAAAGAAAGAAAGAAAG
UBFD1	-1067	-1049	+	1.83	GAAAGAAAGAAAGAAAG
ZBTB2	-1110	-1092	+	-6.59	CGAAGAGTGGGAGGAGGT

3 MA0080.2 SPI1 9.64024729829 0.435374151649 -1466:-1022 6.34201697794e-09

list of hits

CDKAL1	-1115	-1108	+	6.42	AGAAAGT
CUL9	-1023	-1016	+	6.96	GGGAAGT
GRID2	-1312	-1305	+	8.65	AGGAAGT
RMND1	-1419	-1412	+	6.45	AAGAAGT
SUGCT	-1372	-1365	+	6.78	AGGAAAT
SUGCT	-1022	-1015	+	6.31	AGGAAGA
UBFD1	-1466	-1459	+	6.31	AGGAAGA
UBFD1	-1458	-1451	+	6.31	AGGAAGA
UBFD1	-1446	-1439	+	6.31	AGGAAGA
UBFD1	-1434	-1427	+	6.31	AGGAAGA
UBFD1	-1418	-1411	+	6.31	AGGAAGA

UBFD1	-1394	-1387	+	6.31	AGGAAGA
UBFD1	-1386	-1379	+	6.31	AGGAAGA
UBFD1	-1374	-1367	+	6.31	AGGAAGA
UBFD1	-1350	-1343	+	6.31	AGGAAGA
UBFD1	-1326	-1319	+	6.31	AGGAAGA
UBFD1	-1302	-1295	+	6.31	AGGAAGA
UBFD1	-1295	-1288	+	6.31	AGGAAGA
UBFD1	-1287	-1280	+	6.31	AGGAAGA
UBFD1	-1275	-1268	+	6.31	AGGAAGA
UBFD1	-1255	-1248	+	6.31	AGGAAGA
UBFD1	-1235	-1228	+	6.31	AGGAAGA
UBFD1	-1199	-1192	+	6.31	AGGAAGA
UBFD1	-1167	-1160	+	6.31	AGGAAGA
UBFD1	-1159	-1152	+	6.31	AGGAAGA
UBFD1	-1147	-1140	+	6.31	AGGAAGA
UBFD1	-1119	-1112	+	6.31	AGGAAGA
UBFD1	-1107	-1100	+	6.31	AGGAAGA
ZBTB2	-1075	-1068	+	8.65	AGGAAGT

4 MA0143.1 Sox2 12.9512704469 0.361474939125 -584:-175 1.64077575302e-06

list of hits

CDKAL1	-0555	-540	-	5.13	TATACAGGTCAAAAT
CDKAL1	-0480	-465	-	5.50	TGAGCATCAAAAAAA
CDKAL1	-0301	-286	-	5.25	TGTTTCAGGACAGAGG
CDKAL1	-0217	-202	-	6.36	TAAGAATAATAATAA
CUL9	-0584	-569	+	5.05	GCATTTTATGTGCA
CUL9	-0398	-383	+	5.47	GCTTTCTTTTGTATT
CUL9	-0354	-339	+	6.52	TCATTTTGTGCACA
CUL9	-0323	-308	+	4.86	CCTTTGTTTTCTCTT
ENOX1	-0283	-268	+	6.35	CCATTGATGTTTAAT
GRID2	-0427	-412	+	6.11	TTTTTGTTTTACTTA
GRID2	-0411	-396	+	5.12	TTATTATAATTTTAA
GRID2	-0280	-265	+	5.31	ACTTTATAATTGAAA
LDLRAD3	-0400	-385	+	5.65	CTTTTGTCCCTCAGC
PALB2	-0506	-491	-	7.00	TTAATATCAGAATGG
PALB2	-0396	-381	-	7.41	AATAAATAACAAAGC

PALB2	-0346	-331	-	5.23	ACTAAATGCCAAAGG
RMND1-0251	-236	-	7.55	TTTGAATGAAAAAAC	
RMND1-0217	-202	-	4.65	AGAGACAAACAATGG	
SUGCT	-0180	-165	-	5.05	GAAGGAAGAGAAAGG
UBFD1	-0560	-545	+	5.54	CCTCTGTATTCCAGA
UBFD1	-0505	-490	-	5.80	GCAAAAGAAGAAAGG
ZBTB2	-0268	-253	+	5.16	CTATTTATTTTAAA
ZBTB2	-0175	-160	+	5.71	GTATTATTTTTCATA

5 MA0125.1 Nobox 9.57325016988 0.25986841647 -2965:-1850 2.12953021092e-06

list of hits

CDKAL1	-2965	-2957	+	7.09	TAATTGTT
CDKAL1	-2622	-2614	+	6.48	TAATTGGA
CDKAL1	-2320	-2312	-	8.58	ACCAATTA
ENOX1	-2665	-2657	-	6.48	TCCAATTA
ENOX1	-2240	-2232	-	8.20	ACTAATTA
GRID2	-2932	-2924	-	6.06	CTCAATTA
GRID2	-2770	-2762	-	6.44	GTTAATTA
GRID2	-2461	-2453	+	7.79	TAATTACT
GRID2	-2269	-2261	+	6.12	TAATGGCT
GRID2	-2056	-2048	-	8.20	ACTAATTA
GRID2	-1850	-1842	-	7.09	ATCAATTA
LDLRAD3	-2941	-2933	-	6.82	GACAATTA
PALB2	-2813	-2805	+	6.14	TAATGAGT
PALB2	-2754	-2746	+	8.17	TAATTGCT
PALB2	-2732	-2724	+	6.71	TAATTAAT
PALB2	-2576	-2568	-	6.14	ACTCATTA
RMND1	-2114	-2106	-	6.48	TCCAATTA
RMND1	-1889	-1881	+	8.20	TAATTAGT
SUGCT	-2941	-2933	-	8.20	ACTAATTA
SUGCT	-2359	-2351	-	6.06	CACAATTA
SUGCT	-2147	-2139	-	8.20	ACTAATTA
SUGCT	-1908	-1900	-	6.14	ACTCATTA
UBFD1	-2458	-2450	-	6.82	GTCAATTA
UBFD1	-2076	-2068	+	6.82	TAATTGAC
ZBTB2	-2426	-2418	+	6.06	TAATTGAG

6	MA0151.1	ARID3A	9.89631870174	0.0617283971313	-476:-385	8.0839806711e-06
		list of hits				
		CDKAL1	-0475	-469	+	6.88 ATCAAA
		CDKAL1	-0425	-419	-	7.51 TTTAAT
		CDKAL1	-0385	-379	-	7.51 TTTAAT
		GRID2	-0456	-450	-	6.88 TTTGAT
		GRID2	-0401	-395	-	7.51 TTTAAT
		LDLRAD3	-0476	-470	-	7.51 TTTAAT
		PALB2	-0432	-426	+	7.51 ATTAAA
		ZBTB2	-0474	-468	+	6.88 ATCAAA
7	MA0135.1	Lhx3	16.3541414376	0.130769234437	-2391:-2281	1.38967172379e-05
		list of hits				
		CDKAL1	-2313	-2300	-	3.98 ATTTATGTAATTT
		CDKAL1	-2297	-2284	+	4.57 AATTTAAACATTA
		CDKAL1	-2281	-2268	+	4.06 AATTTTAATATAT
		ENOX1	-2368	-2355	-	4.68 AGTGAATTATTTT
		ENOX1	-2317	-2304	+	5.86 AAAATAAATATTC
		GRID2	-2391	-2378	-	3.80 TGCAAATTAATAT
		GRID2	-2355	-2342	-	8.59 TAAAAATTAATCA
		PALB2	-2327	-2314	+	3.69 AGATTATTTTACT
		PALB2	-2302	-2289	+	6.49 AGATTTAATATTT
		RMND1	-2370	-2357	-	4.20 GAAAATTTGATTT
8	MA0040.1	Foxq1	14.0702572317	0.202020204541	-1031:-970	1.39649094405e-05
		list of hits				
		ENOX1	-1031	-1020	+	5.79 AATGGTTTATT
		ENOX1	-0982	-971	+	4.46 TCAAGTTTGTT
		GRID2	-0991	-980	-	4.88 AAGAAACATTT
		GRID2	-0976	-965	+	8.28 GAATGTTTAGG
		LDLRAD3	-1027	-1016	+	4.52 CATTGTTTCATG
		LDLRAD3	-1010	-999	-	5.61 AATAAAAAATT
		LDLRAD3	-0970	-959	+	4.03 AATTTTTTAGA
		RMND1	-1031	-1020	+	4.44 AATTTTTTAGT

9	MA0109.1	Hltf	7.46926527425	0.397046551108	-540:79	1.89510195289e-05
		list of hits				
		CDKAL1	-0401	-391	+	5.98 ATCCTTTTCC
		ENOX1 -0196	-186	+	6.42	AACCTTTTCT
		ENOX1 +0059	69	+	6.27	ATCCTTATGC
		GRID2 -0315	-305	-	6.29	ATAAAAAGGTA
		LDLRAD3	-0351	-341	-	5.94 AGATATGGTG
		LDLRAD3	-0152	-142	+	6.05 TAACTTATCC
		LDLRAD3	+0079	89	-	6.28 GGATAAGGTA
		PALB2 -0540	-530	+	6.03	AAACTTTTAA
		UBFD1 -0483	-473	-	5.96	ACAAAAGGTG
		UBFD1 -0294	-284	-	6.31	CGATAAGGTT
		ZBTB2 -0197	-187	+	6.01	ATACATATAT
		ZBTB2 -0181	-171	-	6.01	ATATATGTAT
10	MA0041.1	Foxd3	12.944828444	0.223404252126	-2394:-2293	2.50510928849e-05
		list of hits				
		CDKAL1	-2317	-2305	+	7.76 AATTATTTATGT
		CDKAL1	-2296	-2284	-	5.42 ATTTAAACATTA
		ENOX1 -2376	-2364	-	5.75	GAATAAACAGTG
		ENOX1 -2364	-2352	+	6.31	AATTATTTTTAT
		ENOX1 -2316	-2304	-	10.98	AAATAAATATTC
		GRID2 -2388	-2376	-	9.14	AAATTAATATTC
		GRID2 -2293	-2281	+	6.16	TATTATTGATGT
		PALB2 -2326	-2314	+	6.08	GATTATTTTACT
		PALB2 -2301	-2289	-	5.51	GATTTAATATTT
		RMND1-2370	-2358	+	6.04	GAAAATTTGATT
		SUGCT -2339	-2327	+	9.29	AAATGTTTTATT
		SUGCT -2317	-2305	-	6.56	GGAAAAACATTA
		UBFD1 -2394	-2382	+	5.79	GCATTTTTTTTT
		ZBTB2 -2363	-2351	-	5.48	ACAAAAAAATAC
11	MA0151.1	ARID3A	9.89631870174	0.0617283971313	-2766:-2034	2.99075326059e-05
		list of hits				
		CDKAL1	-2734	-2728	-	7.51 TTTAAT
		CDKAL1	-2725	-2719	+	7.51 ATTAAA

CDKAL1	-2278	-2272	-	7.51	TTTAAT
CDKAL1	-2268	-2262	+	7.51	ATTAAA
CDKAL1	-2184	-2178	+	7.51	ATTAAA
GRID2	-2766	-2760	+	7.51	ATTAAA
GRID2	-2653	-2647	+	7.51	ATTAAA
GRID2	-2540	-2534	+	7.51	ATTAAA
GRID2	-2463	-2457	-	7.51	TTTAAT
GRID2	-2072	-2066	+	7.51	ATTAAA
GRID2	-2034	-2028	+	7.51	ATTAAA
LDLRAD3	-2627	-2621	+	7.51	ATTAAA
PALB2	-2670	-2664	-	7.51	TTTAAT
PALB2	-2605	-2599	+	7.51	ATTAAA
PALB2	-2299	-2293	-	7.51	TTTAAT
RMND1	-2484	-2478	-	7.51	TTTAAT
RMND1	-2046	-2040	+	7.51	ATTAAA
SUGCT	-2391	-2385	-	7.51	TTTAAT
SUGCT	-2309	-2303	+	7.51	ATTAAA
SUGCT	-2187	-2181	-	7.51	TTTAAT
ZBTB2	-2664	-2658	+	7.51	ATTAAA
ZBTB2	-2052	-2046	-	7.51	TTTAAT

12 MA0160.1 NR4A2 10.1646683385 0.491758237593 -67:23 4.88654463449e-05

list of hits

CDKAL1	+0002	10	-	6.03	TTGATCTC
CUL9	-0027	-19	-	7.21	GTGACCTA
ENOX1	-0040	-32	+	6.24	CAGGTCAA
ENOX1	+0023	31	-	5.92	GTGATCTG
LDLRAD3	-0055	-47	+	6.30	AAGGCCAG
LDLRAD3	-0004	4	-	6.92	CTGACCTC
RMND1	-0067	-59	+	9.27	AAGGTCAC

13 MA0047.2 Foxa2 13.2676175109 0.315129053384 -2015:-1963 5.47064379714e-05

list of hits

CDKAL1	-1963	-1951	-	5.14	CTATTGCAAATA
GRID2	-2014	-2002	+	7.52	TATTGACAATGG
GRID2	-1984	-1972	+	5.15	TGTTAACTTAAC



LDLRAD3	-1981	-1969	-	8.98	TTAAAGTAAATA
PALB2 -2015	-2003	+	5.58	TGTTTATTTGTT	
SUGCT -1990	-1978	+	6.51	TGTTGGCTTATA	
ZBTB2 -1983	-1971	-	5.24	GATATATACACA	

14 MA0135.1 Lhx3 16.3541414376 0.130769234437 -1116:-983 7.74811099157e-05

list of hits

CDKAL1	-1045	-1032	+	3.46	TAATAAAATTTCT
CUL9 -1093	-1080	+	5.95	AGTTTATTAACC	
CUL9 -1005	-992	-	3.40	GCCTAGTTAATCA	
ENOX1 -1048	-1035	+	4.43	TAATCAATTTTCA	
GRID2 -1021	-1008	+	4.91	AAAATTATTAACC	
LDLRAD3	-1011	-998	-	3.81	CAATAAAAAATTA
PALB2 -1116	-1103	-	4.25	GATATGTTAATTA	
RMND1-1036	-1023	+	3.79	ACAGTAATTTTTT	
RMND1-1015	-1002	-	7.76	TATGAATTAATCT	
ZBTB2 -0983	-970	-	9.79	AAAAAGTTAATTT	

15 MA0077.1 SOX9 9.07881468797 0.358187139655 -2030:-1994 8.04621716987e-05

list of hits

ENOX1 -2030	-2021	+	5.94	TAACAAAGG	
GRID2 -2011	-2002	+	6.76	TGACAATGG	
PALB2 -2024	-2015	-	5.81	CCATTCTTT	
SUGCT -1994	-1985	-	5.85	GTATTGTTG	
ZBTB2 -2021	-2012	+	6.13	TACCAATGG	

16 MA0002.2 RUNX1 10.4014248352 0.501590918453 -2854:-2371 8.15305317703e-05

list of hits

CDKAL1	-2657	-2646	+	6.46	ATCTGTGGCAT
CDKAL1	-2591	-2580	-	6.45	GACCCACAGCA
CDKAL1	-2551	-2540	-	7.11	ATACCACAGCT
CUL9 -2831	-2820	+	6.28	GCCTGTGGTGG	
CUL9 -2668	-2657	-	5.99	CGCCCACAGCA	
CUL9 -2520	-2509	-	7.53	CAGCCACAGGA	
ENOX1 -2838	-2827	+	5.69	CATTGTGGCTC	
ENOX1 -2739	-2728	+	7.11	AGCTGTGGTAT	

ENOX1	-2693	-2682	+	7.98	GGCTGTGGTAT
GRID2	-2777	-2766	+	9.52	GGCTGTGGTTA
LDLRAD3		-2854	-2843	+	5.87 ATATGTGGCTA
LDLRAD3		-2650	-2639	+	6.99 AGCTGTGGGTA
LDLRAD3		-2497	-2486	-	6.78 ATGCCACAGCC
LDLRAD3		-2451	-2440	-	6.65 ACACCACAGCT
LDLRAD3		-2394	-2383	-	6.47 AACCCACATCC
PALB2	-2468	-2457	-	7.52	ACACCACAGCC
PALB2	-2371	-2360	-	7.56	AAGCCACAATG
RMND1	-2693	-2682	-	8.58	AAACCACACAA
SUGCT	-2416	-2405	-	7.14	TAACCACATGA
UBFD1	-2831	-2820	+	7.73	AGCTGTGGGTT
UBFD1	-2440	-2429	-	6.05	AAACCAAAAGA