

SUPPLEMENTARY MATERIAL FOR:

Identification and mapping of DNA binding proteins target sequences in long genomic regions by two-dimensional EMSA

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Table S1. Positions of PTS in the FXYD5-TZFP Region of Human Chromosome 19

Site (No.)	Position Relative to Genes	Chromosome Positions	Occurrence (times)
Repeat-containing PTS			
1	5 kb downstream of <i>FXYD5</i> gene	40356974-40357292	2
2	Last intron of EST BG204689	40398556-40399030	1
3	Overlaps with 5'-end of EST T62708	40402601-40402780	5
4	Intergenic	40421466-40422044	1
5	2 nd intron of <i>LISCH7</i> gene	40436703-40437080	1
6	3.5 kb downstream of <i>HAMP</i> gene	40471480-40472062	1
7	1 st intron of EST BP306776	40504996-40505323	2
8	3.5 kb upstream of <i>GPR43</i> gene	40628427-40629030	5
9	Intergenic	40651722-40652065	1
10	Intergenic	40652903-40653191	1
11	Intergenic	40655141-40655370	1
12	Intergenic	40661566-40661842	1
13	1 kb downstream of <i>BX648076</i> gene	40704864-40705093	1
14	4 th intron of <i>ATP4A</i> gene	40744193-40744839	2
15	3 kb upstream of <i>ATP4A</i> gene	40749233-40749645	1
16	4 kb upstream of <i>ATP4A</i> gene	40749642-40749967	1
17	Intergenic	40752664-40752938	1
18	3.8 kb downstream of EST AW883068	40754563-40755099	1
19	2 kb upstream of EST AW883068	40760757-40761081	2
20	2.7 kb upstream of EST AW883068	40761421-40761773	3
21	4.2 kb downstream of EST AA634755	40766380-40766655	1
22	Intergenic	40787685-40788009	1
23	170 bp downstream of <i>BC064390</i> gene	40806509-40806913	1
24	2 nd intron of <i>BC031682</i> gene	40813286-40813601	4
25	5 th intron of <i>UPK1A</i> gene	40859417-40860049	3
26	75 bp downstream of <i>UPK1A</i> gene	40861335-40861684	1
27	2.2 kb upstream of <i>TZFP</i> gene	40893270-40893583	2
Unique PTS			
28	1 st intron of EST BG204689	40387178-40387439	1
29	Overlaps with 3'-end of EST T62708	40402959-40403277	1
30	6 th intron of <i>LISCH7</i> gene	40449442-40449640	1
31	1 st intron of <i>MAG</i> gene	40475711-40476018	2
32	1 st intron of <i>MAG</i> gene	40475881-40476532	2
33	4 th intron of <i>MAG</i> gene	40480318-40480515	1
34	5'+1 st exon+1 st intron of <i>CD22</i> gene	40511820-40512161	1
35	5' of <i>GPR41</i> gene	40540695-40540907	1
36	3' of <i>GPR42</i> gene	40555995-40556314	1
37	Intergenic	40558387-40558657	3
38	1.8 kb upstream of EST DA962996	40619230-40619684	1
39	Intergenic	40623593-40623849	1
40	750 bp upstream of <i>UNQ467</i> gene	40674014-40674450	1
41	1,25 kb upstream of <i>UNQ467</i> gene	40674676-40675342	1
42	5-6 th introns + 5-6 th exons of <i>GAPDS</i> gene	40725076-40725562	1
43	10 th exon, 9-10 th introns of <i>GAPDS</i> gene	40727419-40727843	1
44	5-6 th exons, 5 th intron of <i>NIFIE14</i> gene	40729654-40729917	2
45	18 th intron of <i>ATP4A</i> gene	40734984-40735428	1
46	16 th intron of <i>ATP4A</i> gene	40737302-40737645	1
47	4 th intron of <i>ATP4A</i> gene	40744836-40745206	1
48	3 rd intron of <i>ATP4A</i> gene	40745297-40745930	1
49	3 rd intron of <i>BC064390</i> gene	40797544-40797751	1
50	300 bp downstream of <i>ETV2</i> gene	40828028-40828258	1
51	180 bp downstream of <i>UPK1A</i> gene	40861510-40862152	2
52	Just upstream of <i>TZFP</i> gene	40895159-40895571	1

Table S2. Repeat-Containing Protein Factor Binding Sites

Sequence ID	Length (bp)	Repeats
1	319	1-141 AluSg 207-319 L1M3
2	475	1-142 MLT1K 226-475 AluSx
3	180	1-180 AluSq
4	585	1-37 Alu 54-124 L2 125-426 AluSx 427-494 L2 498-585 LTR/ERV1
5	378	168-378 AluSx
6	583	1-252 AluSx 263-429 FRAM
7	328	1-54 L1MD 56-197 AluSp/q 200-328 LTR/ERV1
8	604	39-554 L2
9	344	103-344 AluSx
10	289	4-140 AluY
11	230	1-230 L2
12	277	67-277 Tigger3
13	338	1-37 Alu 58-190 FLAM_A
14	647	398-647 AluSx
15	413	4-124 L1MC4 125-343 MER30 350-398 L1MC4
16	326	28-212 L1MC4
17	275	1-239 AluSg
18	537	1-211 Trigger3 485-537 LTR/ERVK
19	325	68-325 L1PB1
20	353	212-353 LTR/ERV1
21	276	44-276 AluSg1
22	325	1-324 LTR/ERV1
23	405	2-157 L1ME2 327-405 AluS
24	316	1-230 AluSg 231-314 L2
25	633	1-262 AluSx 266-534 AluJo 569-633 AluJ
26	350	1-239 AluSx 249-350 MLT1K
27	314	1-240 AluSx

Table S3. Annotation File That Includes Positions of Identified PTS

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browser pix 1600
browser position chr19:40336896-40899780

track name=PTS description="Protein target sites" color=0,0,255
chr19 . TF 40387178 40387439 . . . 28
chr19 . TF 40402959 40403277 . . . 29
chr19 . TF 40449442 40449640 . . . 30
chr19 . TF 40475711 40476018 . . . 31
chr19 . TF 40475881 40476532 . . . 32
chr19 . TF 40480318 40480515 . . . 33
chr19 . TF 40511820 40512161 . . . 34
chr19 . TF 40540695 40540907 . . . 35
chr19 . TF 40555995 40556314 . . . 36
chr19 . TF 40558387 40558657 . . . 37
chr19 . TF 40619230 40619684 . . . 38
chr19 . TF 40623593 40623849 . . . 39
chr19 . TF 40674014 40674450 . . . 40
chr19 . TF 40674676 40675342 . . . 41
chr19 . TF 40725076 40725562 . . . 42
chr19 . TF 40727419 40727843 . . . 43
chr19 . TF 40729654 40729917 . . . 44
chr19 . TF 40734984 40735428 . . . 45
chr19 . TF 40737302 40737645 . . . 46
chr19 . TF 40744836 40745206 . . . 47
chr19 . TF 40745297 40745930 . . . 48
chr19 . TF 40797544 40797751 . . . 49
chr19 . TF 40828028 40828258 . . . 50
chr19 . TF 40861510 40862152 . . . 51
chr19 . TF 40895159 40895571 . . . 52

track name=PTSR description="Protein target sites, repeat-containing"
color=0,255,0
chr19 . TF 40356974 40357292 . . . 1
chr19 . TF 40398556 40399030 . . . 2
chr19 . TF 40402601 40402780 . . . 3
chr19 . TF 40421466 40422044 . . . 4
chr19 . TF 40436703 40437080 . . . 5
chr19 . TF 40471480 40472062 . . . 6
chr19 . TF 40504996 40505323 . . . 7
chr19 . TF 40628427 40629030 . . . 8
chr19 . TF 40651722 40652065 . . . 9
chr19 . TF 40652903 40653191 . . . 10
chr19 . TF 40655141 40655370 . . . 11
chr19 . TF 40661566 40661842 . . . 12
chr19 . TF 40704839 40705176 . . . 13
chr19 . TF 40744193 40744839 . . . 14
chr19 . TF 40749233 40749645 . . . 15
chr19 . TF 40749642 40749967 . . . 16
chr19 . TF 40752664 40752938 . . . 17
chr19 . TF 40754563 40755099 . . . 18
chr19 . TF 40760757 40761081 . . . 19
chr19 . TF 40761421 40761773 . . . 20
chr19 . TF 40766380 40766655 . . . 21
chr19 . TF 40787685 40788009 . . . 22
chr19 . TF 40806509 40806913 . . . 23
chr19 . TF 40813286 40813601 . . . 24
chr19 . TF 40859417 40860049 . . . 25
chr19 . TF 40861335 40861684 . . . 26
chr19 . TF 40893270 40893583 . . . 27

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