## EnrichmentHsSymbolsFile2 Top pathways by non-permulation

Geneset	stat	num.genes	pval	p.adj	gene.vals
REACTOME_SIGNALING_BY_GPCR	-0.07202074	614	-	8.986e-06	ARHGEF12:11 VIPR1:24 ADCY1:43 CXCR5:46 GRM2:63 FGD3:77
REACTOME_CLASS_A_1_RHODOPSIN_LIKE_RECEPT	-0.09866019	294	6.488e-09	1.403e-05	CXCR5:46 TAC1:132 CHRM2:144 PLPPR4:152 NTSR1:153 UTS2R:167
REACTOME_GPCR_LIGAND_BINDING	-0.08611577	394	5.070e-09	1.403e-05	VIPR1:24 CXCR5:46 GRM2:63 TAC1:132 CHRM2:144 GRM6:148
KEGG_NEUROACTIVE_LIGAND_RECEPTOR_INTERAC	-0.10182211	259	1.819e-08	2.951e-05	VIPR1:24 GRM2:63 CHRM2:144 GRM6:148 NTSR1:153 UTS2R:167
MIKKELSEN_MEF_HCP_WITH_H3K27ME3	-0.06790086	546	6.754e-08	8.764e-05	CNTN4:26 RYR2:32 CSMD1:62 UGT8:65 APBA2:91 DSCAML1:98
REACTOME_MUSCLE_CONTRACTION	-0.11460872	181	1.099e-07	1.188e-04	RYR2:32 SCN9A:44 LMOD1:57 HIPK1:60 ITPR1:117 ITGA1:119
REACTOME_NEURONAL_SYSTEM	-0.07869481	373	1.987e-07	1.842e-04	ADCY1:43 KCNA10:79 APBA2:91 KCNJ12:139 KCNV2:151 KCNJ14:158
WP_GPCRS_CLASS_A_RHODOPSINLIKE	-0.10243240	206	4.226e-07	3.427e-04	CXCR5:46 CHRM2:144 NTSR1:153 MAS1:229 DRD2:296 DRD5:417
NIKOLSKY_BREAST_CANCER_8P12_P11_AMPLICON	0.19888060	52	7.069e-07	4.586e-04	ANK1:5 IDO2:9 RAB11FIP1:79 ADAM9:124 ADGRA2:251 STAR:288
REACTOME_G_ALPHA_I_SIGNALLING_EVENTS	-0.08959898	261	6.645e-07	4.586e-04	ADCY1:43 CXCR5:46 GRM2:63 ITPR1:117 CHRM2:144 GRM6:148
REACTOME_POTASSIUM_CHANNELS	-0.14890836	90	1.066e-06	6.285e-04	KCNA10:79 KCNJ12:139 KCNV2:151 KCNJ14:158 KCNQ3:168 KCNF1:319
REACTOME_CARDIAC_CONDUCTION	-0.12621008	119	2.027e-06	1.096e-03	RYR2:32 SCN9A:44 HIPK1:60 ITPR1:117 KCNJ12:139 KCNJ14:158
REACTOME_PEPTIDE_LIGAND_BINDING_RECEPTOR	-0.10181305	166	6.202e-06	3.095e-03	CXCR5:46 TAC1:132 NTSR1:153 UTS2R:167 QRFPR:223 NPS:387
REACTOME_VOLTAGE_GATED_POTASSIUM_CHANNEL	-0.20050844	42	6.953e-06	3.222e-03	KCNA10:79 KCNV2:151 KCNQ3:168 KCNF1:319 KCNAB1:468 KCNV1:508
BENPORATH_ES_WITH_H3K27ME3	-0.04231062	964	1.055e-05	4.562e-03	HSF4:19 CSF1:51 PHLDB1:53 LMOD1:57 CSMD1:62 SYT6:71
BLALOCK_ALZHEIMERS_DISEASE_DN	-0.03651079	1093	5.578e-05	2.262e-02	UAP1:1 NOS1AP:2 LRRN3:7 HERC2:13 SYNJ1:34 CHL1:76
KIM_ALL_DISORDERS_CALB1_CORR_UP	-0.05295548	493	6.145e-05	2.345e-02	VIPR1:24 CAMSAP2:30 RYR2:32 SYNJ1:34 CHL1:76 SORL1:89
CHEN_LIVER_METABOLISM_QTL_CIS	-0.12436854	84	8.228e-05	2.966e-02	UAP1:1 DDR2:31 NAV1:52 CEP170:111 ADAMTS4:135 CDH19:171
LIU_OVARIAN_CANCER_TUMORS_AND_XENOGRAFTS	-0.03252784	1321	9.022e-05	3.081e-02	LRRN3:7 TSHZ3:8 CNTN3:12 CNTN4:26 SYNPO2:28 DDR2:31
MEISSNER_NPC_HCP_WITH_H3K4ME2_AND_H3K27M	-0.06265198	328	1.009e-04	3.274e-02	VIPR1:24 RYR2:32 TMEM132E:97 DSCAML1:98 ZNF536:112 BNC1:192
KEGG_CALCIUM_SIGNALING_PATHWAY	-0.08643005	169	1.085e-04	3.353e-02	RYR2:32 ADCY1:43 PHKB:99 ITPR1:117 PTK2B:136 CHRM2:144
NIKOLSKY_BREAST_CANCER_15Q26_AMPLICON	-0.25410735	19	1.258e-04	3.711e-02	ARRDC4:38 SYNM:254 CHSY1:418 PCSK6:529 ALDH1A3:537 IGF1R:620
REACTOME_TRNA_MODIFICATION_IN_THE_NUCLEU	0.17633218	39	1.391e-04	3.925e-02	THADA:106 TRMT10A:155 TRMT1:376 TRMT5:391 CTU2:427 TYW1:468
MIKKELSEN_MCV6_HCP_WITH_H3K27ME3	-0.05453735	414	1.496e-04	4.043e-02	SYT6:71 TMEM132E:97 PCNX2:115 HS3ST2:118 NTSR1:153 KCNQ3:168
BENPORATH_SUZ12_TARGETS	-0.03740463	899	1.635e-04	4.225e-02	HSF4:19 CSF1:51 PHLDB1:53 CSMD1:62 SYT6:71 BRINP3:94
REACTOME_PHASE_0_RAPID_DEPOLARISATION	-0.19841725	30	1.693e-04	4.225e-02	SCN9A:44 CAMK2D:163 CAMK2B:231 SCN3B:279 SCN2B:435 SCN1A:449
REACTOME_NERVOUS_SYSTEM_DEVELOPMENT	-0.04893575	476	2.719e-04	6.534e-02	ARHGEF12:11 ANK2:15 SCN9A:44 CHL1:76 DNM3:81 DSCAML1:98
NIKOLSKY_BREAST_CANCER_16P13_AMPLICON	0.10460137	99	3.261e-04	7.053e-02	PGAP6:283 ZNF213:465 SPSB3:474 EME2:495 RHBDL1:560 WDR90:796
REACTOME_G_ALPHA_S_SIGNALLING_EVENTS	-0.09150432	130	3.198e-04	7.053e-02	VIPR1:24 ADCY1:43 NPS:387 DRD5:417 VIPR2:426 CRHR1:548
WP_CALCIUM_REGULATION_IN_CARDIAC_CELLS	-0.09295291	126	3.189e-04	7.053e-02	RYR2:32 ADCY1:43 ITPR1:117 GJA8:142 CHRM2:144 CAMK2D:163
GRAESSMANN_RESPONSE_TO_MC_AND_SERUM_DEPR	-0.07657177	177	4.507e-04	9.249e-02	CXCR5:46 CSF1:51 DNM3:81 SAMHD1:114 FJX1:129 NXNL2:199
WP_PRADERWILLI_AND_ANGELMAN_SYNDROME	-0.13794599	54	4.562e-04	9.249e-02	HERC2:13 GABRR1:341 GABRA5:415 GABRB3:629 UBE3A:688 GABRG3:739
REACTOME_TRANSMISSION_ACROSS_CHEMICAL_SY	-0.06604086	234	5.152e-04	1.013e-01	ADCY1:43 KCNJ12:139 CAMK2D:163 CACNA1B:173 PPFIA4:214 CAMK2B:231
REACTOME_CHEMOKINE_RECEPTORS_BIND_CHEMOK	-0.15742195	40	5.724e-04	1.061e-01	CXCR5:46 CCR1:431 CCR3:741 CXCL13:871 CCL1:917 ACKR2:1069
DAZARD_RESPONSE_TO_UV_NHEK_DN	0.06051231	276	5.585e-04	1.061e-01	DST:57 BPTF:69 GSE1:145 TMEM131L:163 AKAP9:181 ASXL1:206
BENPORATH_EED_TARGETS	-0.03394417	902	6.119e-04	1.103e-01	HSF4:19 CSMD1:62 SORCS2:69 BRINP3:94 TMEM132E:97 DSCAML1:98
ROYLANCE_BREAST_CANCER_16Q_COPY_NUMBER_D	-0.20894118	22	6.929e-04	1.183e-01	PHKB:99 ORC6:106 NETO2:120 LPCAT2:198 MMP2:207 SHCBP1:339
WP_CLOCKCONTROLLED_AUTOPHAGY_IN_BONE_MET	0.11204417	77	6.808e-04	1.183e-01	ARHGAP4:518 MEPE:598 CLOCK:648 BECN1:650 EFNB2:845 NR1D2:904
NIKOLSKY_BREAST_CANCER_8Q12_Q22_AMPLICON	-0.08968339	118	7.747e-04	1.193e-01	TMEM64:20 MMP16:95 RBM12B:138 ZFHX4:147 NECAB1:215 OSGIN2:243
REACTOME_INTERACTION_BETWEEN_L1_AND_ANKY	-0.18417686	28	7.440e-04	1.193e-01	ANK2:15 SCN9A:44 KCNQ3:168 SCN3B:279 SCN2B:435 SCN1A:449