

Supplementary Table 3

Ctrl siLonp1 vs siScramble							
NAME	SIZE	ES	NES	NOM p-val	FDR q-val	FWER p-val	RANK AT MAX
REACTOME_NUCLEAR_EVENTS_KINASE_AND_TRANSCRIPTION_FACTOR_ACTIVATION	54	0.724	2.478	0.000	0.000	0	1692
REACTOME_NGF_STIMULATED_TRANSCRIPTION	33	0.780	2.386	0.000	0.000	0	1342
REACTOME_ELASTIC_FIBRE_FORMATION	25	0.785	2.294	0.000	0.000	0	1534
REACTOME_SIGNALING_BY_NTRKS	113	0.573	2.209	0.000	0.000	0	2902
REACTOME_EXTRACELLULAR_MATRIX_ORGANIZATION	164	0.539	2.170	0.000	0.000	0	1559
REACTOME KERATINIZATION	38	0.664	2.130	0.000	0.000	0.001	1514
REACTOME MOLECULES ASSOCIATED WITH ELASTIC FIBRES	19	0.782	2.121	0.000	0.000	0.001	1534
REACTOME CONSTITUTIVE SIGNALING BY ABERRANT PI3K IN CANCER	39	0.647	2.067	0.000	0.001	0.008	1477
REACTOME ASSEMBLY AND CELL SURFACE PRESENTATION OF NMDA RECEPTORS	24	0.710	2.064	0.000	0.001	0.009	2396
REACTOME FORMATION OF THE CORNIFIED ENVELOPE	34	0.671	2.064	0.000	0.001	0.009	1020
REACTOME SIGNALING BY RECEPTOR TYROSINE KINASES	377	0.464	2.050	0.000	0.001	0.011	3113
REACTOME MAPK TARGETS NUCLEAR EVENTS MEDIATED BY MAP KINASES	29	0.669	2.023	0.000	0.002	0.021	2240
REACTOME SYNDECAN INTERACTIONS	18	0.757	2.015	0.000	0.002	0.025	1687
REACTOME ROS AND RNS PRODUCTION IN PHAGOCYTES	21	0.702	1.993	0.000	0.003	0.039	3038
REACTOME PI3K AKT SIGNALING IN CANCER	66	0.566	1.991	0.000	0.003	0.04	2102
REACTOME CHONDROITIN SULFATE DERMATAN SULFATE METABOLISM	36	0.628	1.990	0.000	0.003	0.042	2333
REACTOME NEGATIVE REGULATION OF THE PI3K AKT NETWORK	70	0.547	1.942	0.000	0.009	0.118	2742
REACTOME FORMATION OF TUBULIN FOLDING INTERMEDIATES BY CCT TRIC	19	0.713	1.932	0.002	0.010	0.139	2113
REACTOME DEGRADATION OF THE EXTRACELLULAR MATRIX	70	0.540	1.924	0.000	0.011	0.162	1321
REACTOME VOLTAGE GATED POTASSIUM CHANNELS	12	0.772	1.921	0.002	0.011	0.168	1676

REACTOME_SIGNALING_BY_INSULIN_RECEPTOR	54	0.561	1.917	0.000	0.011	0.18	3038
REACTOME_HEPARAN_SULFATE_HEPARIN_HS_GAG_METABOLISM	34	0.613	1.912	0.003	0.011	0.19	1755
REACTOME_GAP_JUNCTION_TRAFFICKING_AND_REGULATION	31	0.629	1.911	0.000	0.011	0.19	2601
REACTOME_ESTROGEN_DEPENDENT_NUCLEAR_EVENTS_DOWNSTREAM_OF_ESR_MEMBRANE_SIGNALING	20	0.691	1.910	0.000	0.010	0.193	2042
REACTOME_INTEGRIN_CELL_SURFACE_INTERACTIONS	45	0.574	1.906	0.000	0.010	0.201	1511
REACTOME_ECM_PROTEOGLYCANS	37	0.603	1.906	0.000	0.010	0.204	1511
REACTOME_NEUREXINS_AND_NEUROLIGINS	34	0.613	1.900	0.000	0.010	0.215	2396
REACTOME_COLLAGEN_DEGRADATION	29	0.626	1.894	0.000	0.011	0.232	1250
REACTOME_A_TETRASACCHARIDE_LINKER_SEQUENCE_IS_REQUIRED_FOR_GAG_SYNTHESIS	15	0.747	1.883	0.000	0.012	0.26	2333
REACTOME_INSULIN_RECEPTOR_RECYCLING	21	0.676	1.872	0.002	0.015	0.316	3330
REACTOME DISSOLUTION_OF_FIBRIN_CLOT	10	0.806	1.868	0.000	0.016	0.333	1236
REACTOME_COLLAGEN_CHAIN_TRIMERIZATION	15	0.721	1.866	0.000	0.016	0.349	1250
REACTOME_PLASMA_LIPOPROTEIN_ASSEMBLY	9	0.820	1.855	0.002	0.018	0.405	685
REACTOME_RHO_GTPASES_ACTIVATION_CIT	18	0.675	1.855	0.002	0.018	0.411	2597
REACTOME_GAP_JUNCTION_ASSEMBLY	18	0.690	1.853	0.000	0.018	0.417	2209
REACTOME_CELL_EXTRACELLULAR_MATRIX_INTERACTIONS	17	0.701	1.847	0.002	0.018	0.438	2601
REACTOME_RAF_INDEPENDENT_MAPK1_3_ACTIVATION	22	0.658	1.843	0.002	0.020	0.465	3595
REACTOME_DEFECTIVE_B4GALT7_CAUSES_EDS_PROGEROID_TYPE	11	0.774	1.841	0.002	0.020	0.474	1541
REACTOME_NON_INTEGRIN_MEMBRANE_ECM_INTERACTIONS	37	0.577	1.838	0.000	0.020	0.489	1687
REACTOME_RECYCLING_PATHWAY_OF_L1	39	0.573	1.829	0.002	0.022	0.53	1399
REACTOME_CHONDROITIN_SULFATE_BIOSYNTHESIS	13	0.753	1.828	0.002	0.022	0.538	1917
REACTOME_SHC1_EVENTS_IN_EGFR_SIGNALING	10	0.794	1.825	0.002	0.022	0.556	770
REACTOME_TGF_BETA_RECEPTOR_SIGNALING_ACTIVATES_SMAPS	32	0.588	1.823	0.000	0.022	0.567	2290

REACTOME_RESPONSE_TO_METAL_IONS	10	0.776	1.810	0.002	0.026	0.626	1747
REACTOME_COLLAGEN_FORMATION	50	0.532	1.808	0.000	0.026	0.635	1817
REACTOME_INTERLEUKIN_6_FAMILY_SIGNALING	14	0.707	1.806	0.003	0.026	0.645	787
REACTOME_NEGATIVE_REGULATION_OF_MAPK_PATHWAY	42	0.551	1.801	0.000	0.028	0.671	3513
REACTOME_YAP1_AND_WWTR1_TAZ_STIMULATED_GENE_EXPRESSION	12	0.747	1.801	0.004	0.027	0.671	2313
REACTOME_SIGNALING_BY_INTERLEUKINS	302	0.417	1.800	0.000	0.027	0.677	1692
REACTOME_CHEMOKINE_RECEPTORS_BIND_CHEMOKINES	10	0.780	1.800	0.002	0.026	0.681	899
REACTOME_INTERLEUKIN_17_SIGNALING	65	0.507	1.799	0.000	0.026	0.681	2920
REACTOME_BASIGIN_INTERACTIONS	19	0.659	1.795	0.002	0.027	0.704	2929
REACTOME_TRANSPORT_OF_CONNEXONS_TO_THE_PLASMA_MEMBRANE	12	0.750	1.794	0.002	0.027	0.705	1399
REACTOME_WNT_LIGAND_BIOGENESIS_AND_TRAFFICKING	13	0.712	1.790	0.006	0.028	0.72	1887
REACTOME_ACTIVATION_OF_NMDA_RECEPTORS_AND_POSTSYNAPTIC_EVENTS	63	0.501	1.786	0.000	0.029	0.74	2419
REACTOME_PARASITE_INFECTIO N	48	0.533	1.785	0.000	0.029	0.747	3175
REACTOME_FLT3_SIGNALING	217	0.424	1.783	0.000	0.029	0.754	2029
REACTOME_COLLAGEN_BIOSYNTHESIS_AND_MODIFYING_ENZYMES	33	0.572	1.779	0.003	0.030	0.775	1250
REACTOME_MAPK_FAMILY_SIGNALING_CASCADES	245	0.420	1.775	0.000	0.031	0.788	3074
REACTOME_COOPERATION_OF_PREFOLDIN_AND_TRIC_CCT_IN_ACTIN_AND_TUBULIN_FOLDING	26	0.607	1.774	0.000	0.031	0.79	2753
REACTOME_SEALING_OF_THE_NUCLEAR_ENVELOPE_NE_BY_ESCRT_III	24	0.625	1.774	0.003	0.031	0.792	2949
REACTOME_NEURONAL_SYSTEM	196	0.431	1.773	0.000	0.030	0.795	2466
REACTOME_ASSEMBLY_OF_COLLAGEN_FIBRILS_AND_OTHER_MULTIMERIC_STRUCTURES	32	0.572	1.772	0.003	0.031	0.803	1530
REACTOME_HEMOSTASIS	385	0.398	1.765	0.000	0.033	0.827	2447
REACTOME_EPHRIN_SIGNALING	17	0.661	1.760	0.002	0.035	0.843	3298
REACTOME_DOWNREGULATION_OF_TGF_BETA_RECEPTOR_SIGNALING	26	0.598	1.759	0.003	0.035	0.845	2290

REACTOME_FOXO_MEDIATED_TRANSCRIPTION_OF_CELL_CYCLE_GENES	16	0.660	1.756	0.004	0.036	0.858	1367
REACTOME_HS_GAG_BIOSYNTHESIS	18	0.652	1.747	0.004	0.039	0.887	1755
REACTOME_RHO_GTPASES_ACTIVATE_WASPS_AND_WAVES	33	0.572	1.742	0.002	0.041	0.9	3175
REACTOME_PROTEIN_PROTEIN_INTERACTIONS_AT_SYNAPSES	50	0.518	1.741	0.002	0.041	0.905	2674
REACTOME_INTERLEUKIN_4_AND_INTERLEUKIN_13_SIGNALING	62	0.503	1.741	0.002	0.041	0.906	2163
REACTOME_GLYCOSAMINOGLYCAN_METABOLISM	85	0.475	1.739	0.003	0.041	0.909	1917
REACTOME_CELL_SURFACE_INTERACTIONS_AT_THE_VASCULAR_WALL	75	0.475	1.735	0.000	0.043	0.924	1732
REACTOME_RHO_GTPASES_ACTIVATE_IQGAPS	23	0.602	1.726	0.000	0.047	0.942	3589
REACTOME_METALLOTHIONEIN_S_BIND_METALS	8	0.784	1.725	0.004	0.047	0.942	1747
REACTOME_GPCR_LIGAND_BINDING	106	0.450	1.724	0.000	0.047	0.944	1669
REACTOME_MUSCLE_CONTRACTION	99	0.460	1.724	0.000	0.047	0.946	2076
REACTOME_LOSS_OF_FUNCTION_OF_SMAD2_3_IN_CANCER	7	0.820	1.723	0.000	0.047	0.948	2290
REACTOME_IL_6_TYPE_CYTOKINE_RECEPTOR_LIGAND_INTERACTIONS	8	0.800	1.722	0.007	0.046	0.95	787
REACTOME_ERK_MAPK_TARGETS	21	0.612	1.716	0.005	0.049	0.966	2240
REACTOME_TOLL_LIKE_RECEPTOR_TLR1_TLR2_CASCADE	82	0.458	1.715	0.000	0.049	0.971	2920
REACTOME_NEGATIVE_REGULATION_OF_TCF_DEPENDENT_SIGNALING_BY_WNT_LIGAND_ANTAGONISTS	5	0.906	1.713	0.002	0.049	0.972	734
REACTOME_REGULATION_OF_INSULIN_LIKE_GROWTH_FACTOR_IGF_TRANSPORT_AND_UPTAKE_BY_INSULIN_LIKE_GROWTH_FACTOR_BINDING_PROTEINS_IGFBPS	65	0.483	1.710	0.003	0.051	0.975	2600
REACTOME_SIGNAL_TRANSDUCTION_BY_L1	17	0.652	1.708	0.004	0.051	0.977	3513
REACTOME_PLASMA_LIPOPROTEIN_REMODELING	15	0.664	1.700	0.010	0.055	0.981	1539
REACTOME_POST_CHAPERONIN_TUBULIN_FOLDING_PATHWAY	17	0.643	1.698	0.008	0.055	0.981	1399
REACTOME_INTEGRIN_SIGNALING	21	0.594	1.696	0.013	0.056	0.982	2395
REACTOME_GROWTH_HORMONE_RECEPTOR_SIGNALING	19	0.619	1.694	0.009	0.057	0.984	399

REACTOME_STRIATED_MUSCLE_CONTRACTION	15	0.658	1.694	0.007	0.057	0.984	1569
REACTOME_SIGNALING_BY_TGF_BETA_RECEPTOR_COMPLEX_IN_CANCER	8	0.784	1.693	0.006	0.056	0.986	2290
REACTOME_RESPONSE_TO_ELEVATED_PLATELET_CYTOSOLIC_C_A2_	85	0.454	1.682	0.000	0.063	0.992	2704
REACTOME_DISEASES_OF_SIGNAL_TRANSDUCTION_BY_GROWTH_FACTOR_RECEPTORS_AND_SECOND_MESSENGERS	329	0.383	1.681	0.000	0.063	0.992	2607
REACTOME_SIGNALING_BY_PDGF	40	0.528	1.681	0.004	0.063	0.992	1707
REACTOME_TYPE_I_HEMIDESMOSOME_ASSEMBLY	9	0.747	1.678	0.011	0.064	0.993	1817
REACTOME_MISSPLICED_LRP5_MUTANTS_HAVE_ENHANCED_BETA_CATENIN_DEPENDENT_SIGNALING	4	0.936	1.675	0.004	0.065	0.993	734
REACTOME_PLATELET_ACTIVATION_SIGNALING_AND_AGGREGATION	167	0.416	1.675	0.000	0.065	0.993	3235
REACTOME_PLASMA_LIPOPROTEIN_ASSEMBLY_REMODELING_AND_CLEARANCE	47	0.501	1.673	0.000	0.065	0.995	1539
REACTOME_P130CAS_LINKAGE_TO_MAPK_SIGNALING_FOR_INTEGRINS	11	0.710	1.670	0.013	0.066	0.996	998
REACTOME_ER_TO_GOLGI_ANTEROGRADE_TRANSPORT	139	0.421	1.669	0.001	0.067	0.996	3709
REACTOME_FOXO_MEDIATED_TRANSCRIPTION_OF_OXIDATIVE_STRESS_METABOLIC_AND_NEURONAL_GENES	20	0.595	1.665	0.016	0.069	0.996	1765
REACTOME_CLASS_A_1_RHODOPSIN_LIKE_RECEPTORS	65	0.463	1.662	0.002	0.071	0.997	1669
REACTOME_GENERATION_OF_SECOND_MESSENGER_MOLECULES	13	0.673	1.659	0.017	0.072	0.997	1355
REACTOME_TRANSLOCATION_OF_SLC2A4_Glut4_TO_THE_PLASMA_MEMBRANE	63	0.472	1.657	0.007	0.073	0.997	3523
REACTOME_ACTIVATION_OF_BAD_AND_TRANSLOCATION_TO_MITOCHONDRIA	15	0.637	1.656	0.026	0.073	0.998	3484
REACTOME_RUNX2_REGULATES_BONE_DEVELOPMENT	23	0.571	1.652	0.010	0.075	0.998	3195
REACTOME_O_GLYCOSYLATION_OF_TSR_DOMAIN_CONTAINING_PROTEINS	20	0.601	1.651	0.019	0.075	0.998	640
REACTOME_CREB_PHOSPHORYLATION	7	0.783	1.647	0.022	0.079	0.998	1267

REACTOME_SIGNALING_BY_LEP TIN	10	0.708	1.644	0.025	0.080	0.999	255
REACTOME_GAB1_SIGNALOSO ME	12	0.694	1.640	0.020	0.083	0.999	1406
REACTOME_CELL_CELL_COMMU NICATION	84	0.441	1.640	0.003	0.082	0.999	1817
REACTOME_TOLL_LIKE_RECEPT OR_10_TLR10_CASCADE	77	0.460	1.635	0.003	0.086	0.999	2920
REACTOME_COPI_MEDIATED_A NTEROGRADE_TRANSPORT	88	0.437	1.633	0.003	0.087	1	3276
REACTOME_PEPTIDE_LIGAND_BI NDING_RECEPTORS	37	0.513	1.632	0.015	0.087	1	2379
REACTOME_DEFECTIVE_EXT2_C AUSES_EXOSTOSES_2	10	0.722	1.630	0.027	0.089	1	1511
REACTOME_ACTIVATION_OF_TH E_AP_1_FAMILY_OF_TRANSCRIP TION_FACTORS	9	0.746	1.629	0.018	0.088	1	2887
REACTOME_TOLL_LIKE_RECEPT OR_9_TLR9_CASCADE	85	0.441	1.623	0.005	0.093	1	2920
REACTOME_FCERI_MEDIATED_ MAPK_ACTIVATION	25	0.549	1.622	0.016	0.094	1	3335
REACTOME_EGFR_DOWNREGUL ATION	25	0.558	1.619	0.012	0.095	1	3855
REACTOME_PLATELET_AGGREG ATION_PLUG_FORMATION_	24	0.556	1.618	0.015	0.096	1	2395
REACTOME_SIGNALING_BY_MA PK_MUTANTS	7	0.768	1.615	0.017	0.098	1	2887
REACTOME_CARDIAC_CONDUCT ION	65	0.461	1.614	0.002	0.098	1	2076
REACTOME_TRANSFERRIN_END OCYTOSIS_AND_RECYCLING	26	0.554	1.614	0.019	0.097	1	3330
REACTOME_SIGNAL_ATTENUATI ON	9	0.719	1.614	0.015	0.097	1	770
REACTOME_P75NTR_NEGATIVEL Y_REGULATES_CELL_CYCLE_VIA_ SC1	5	0.841	1.612	0.008	0.097	1	4
REACTOME_CHYLOMICRON_ASS SEMBLY	3	0.967	1.609	0.000	0.100	1	112
REACTOME_SIGNALING_BY_WN T_IN_CANCER	30	0.534	1.607	0.005	0.101	1	2549
REACTOME_NERVOUS_SYSTEM_ DEVELOPMENT	448	0.360	1.606	0.000	0.101	1	2159
REACTOME_EGFR_INTERACTS_ WITH_PHOSPHOLIPASE_C_GAM MA	5	0.859	1.606	0.014	0.101	1	750
REACTOME_NEUTROPHIL_DEGR ANULATION	342	0.364	1.603	0.000	0.102	1	3019
REACTOME_TOLL_LIKE_RECEPT OR_4_TLR4_CASCADE	106	0.412	1.600	0.000	0.105	1	3122
REACTOME_CTLA4_INHIBITORY_ SIGNALING	18	0.595	1.600	0.024	0.104	1	3080

REACTOME_COPI_INDEPENDENT_GOLGI_TO_ER_RETROGRADE_TRAFFIC	41	0.496	1.599	0.010	0.104	1	2113
REACTOME_INSULIN_RECEPTOR_SIGNALING_CASCADE	34	0.520	1.598	0.015	0.104	1	3012
REACTOME_CELL_JUNCTION_ORGANIZATION	59	0.466	1.598	0.005	0.104	1	1817
REACTOME_GASTRIN_CREB_SIGNALING_PATHWAY_VIA_PKC_AND_MAPK	14	0.630	1.597	0.020	0.104	1	716
REACTOME_SIGNALING_BY_FGF_R1	33	0.520	1.597	0.012	0.104	1	2887
REACTOME_REGULATION_OF_LOCALIZATION_OF_FOXO_TRANSCRIPTION_FACTORS	12	0.662	1.594	0.023	0.105	1	4003
REACTOME_RHO_GTPASES_ACTIVATES_ROCKS	18	0.598	1.586	0.025	0.114	1	3499
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_THE_AP_2_FAMILY_OF_TRANSCRIPTION_FACTORS	28	0.539	1.585	0.019	0.114	1	750
REACTOME_SHC_MEDIATED_CASCADE_FGFR4	10	0.674	1.584	0.024	0.114	1	1208
REACTOME_INTERLEUKIN_7_SIGNALING	16	0.609	1.584	0.024	0.113	1	255
REACTOME_INTERLEUKIN_10_SIGNALING	18	0.597	1.582	0.022	0.114	1	763
REACTOME_NCAM_SIGNALING_FOR_NEURITE_OUTGROWTH	34	0.506	1.582	0.019	0.113	1	2967
REACTOME_CREB1_PHOSPHORYLATION_THROUGH_NMDA_RECEPTOR_MEDIATED_ACTIVATION_OF_RAS_SIGNALING	22	0.553	1.582	0.009	0.113	1	2887
REACTOME_MYD88_INDEPENDENT_TLR4_CASCADE	90	0.418	1.580	0.006	0.114	1	3122
REACTOME_SIGNALING_BY_VEGF	86	0.420	1.580	0.008	0.113	1	3192
REACTOME_FOXO_MEDIATED_TRANSCRIPTION	55	0.454	1.576	0.015	0.117	1	3199
REACTOME_CARGO_CONCENTRATION_IN_THE_ER	31	0.515	1.575	0.016	0.117	1	2028
REACTOME_EXTRA_NUCLEAR_ESTROGEN_SIGNALING	52	0.472	1.575	0.007	0.117	1	2053
REACTOME_DOWNREGULATION_OF_SMAD2_3_SMAD4_TRANSCRIPTIONAL_ACTIVITY	23	0.549	1.574	0.029	0.117	1	3842
REACTOME_SIGNALING_BY_MST1	5	0.817	1.573	0.020	0.117	1	1708
REACTOME_TRAFFICKING_OF_AMPAR_RECEPTORS	18	0.591	1.573	0.027	0.116	1	2466
REACTOME_ION_CHANNEL_TRANSPORT	111	0.409	1.573	0.003	0.116	1	3082

REACTOME_REVERSIBLE_HYDRATION_OF_CARBOXYLIC_ACID_DERIVATIVES	7	0.755	1.572	0.020	0.116	1	2318
REACTOME_COSTIMULATION_BY_THE_CD28_FAMILY	44	0.471	1.570	0.020	0.117	1	3235
REACTOME_SEMAPHORIN_INTERACTIONS	51	0.460	1.567	0.015	0.120	1	1745
REACTOME_GRB2_SOS_PROVIDES_LINKAGE_TO_MAPK_SIGNALING_FOR_INTEGRINS	11	0.644	1.567	0.036	0.119	1	2029
REACTOME_SIGNALING_TO_ERKS	30	0.513	1.567	0.027	0.119	1	3687
REACTOME_RAB_GERANYLGERANYLATION	48	0.466	1.563	0.012	0.122	1	3851
REACTOME_REGULATION_OF_GENE_EXPRESSION_BY_HYPOXIA_INDUCIBLE_FACTOR	9	0.701	1.562	0.029	0.122	1	1852
REACTOME_RUNX3_REGULATES_CDKN1A_TRANSCRIPTION	7	0.772	1.562	0.030	0.122	1	2084
REACTOME_HDL_REMODELING	4	0.879	1.561	0.014	0.122	1	1539
REACTOME_RET_SIGNALING	29	0.519	1.560	0.016	0.122	1	1470
REACTOME_PHYSIOLOGICAL_FACTORS	7	0.738	1.559	0.037	0.122	1	2076
REACTOME_NEUROTRANSMITTER_RECEPTORS_AND_POSTSYNAPTIC_SIGNAL_TRANSMISSION	109	0.407	1.558	0.002	0.123	1	2466
REACTOME_TRANSPORT_TO_THE_GOLGI_AND_SUBSEQUENT_MODIFICATION	159	0.384	1.556	0.000	0.124	1	3709
REACTOME_CD163_MEDIATING_AN_ANTI_INFLAMMATORY_RESPONSE	7	0.742	1.553	0.019	0.127	1	2962
REACTOME_UPTAKE_AND_ACTIONS_OF_BACTERIAL_TOXINS	23	0.531	1.552	0.026	0.128	1	4224
REACTOME_CLATHRIN_MEDIATED_ENDOCYTOSIS	116	0.403	1.551	0.002	0.127	1	4123
REACTOME_ACTIVATION_OF_AMPK_DOWNSTREAM_OF_NMDARS	20	0.566	1.551	0.019	0.127	1	1399
REACTOME_SEMA4D_IN_SEMAPHORIN_SIGNALING	23	0.551	1.551	0.032	0.127	1	3574
REACTOME_SIGNALING_BY_TGF_B_FAMILY_MEMBERS	86	0.418	1.550	0.008	0.126	1	3842
REACTOME_INFECTION_WITH_MYCOBACTERIUM_TUBERCULOSIS	23	0.541	1.548	0.030	0.128	1	3275
REACTOME_DISEASES_ASSOCIATED_WITH_GLYCOSAMINOGLYCAN_METABOLISM	27	0.516	1.544	0.024	0.132	1	1541
REACTOME_SIGNALING_BY_TGF_BETA_RECEPTOR_COMPLEX	72	0.434	1.543	0.013	0.132	1	3842
REACTOME_FGFR2_MUTANT_RECEPTOR_ACTIVATION	19	0.562	1.540	0.030	0.135	1	2715

REACTOME_GPVI_MEDIATED_ACTIVATION_CASCADE	24	0.521	1.539	0.021	0.135	1	3235
REACTOME_HS_GAG_DEGRADATION	17	0.586	1.539	0.030	0.135	1	1511
REACTOME_MET_RECEPTOR_ACTIVATION	4	0.866	1.539	0.014	0.135	1	1708
REACTOME_SYNAPTIC_ADHESION_LIKE_MOLECULES	14	0.603	1.538	0.040	0.135	1	2639
REACTOME_DISEASES_OF_GLYCOSYLATION	97	0.409	1.537	0.009	0.136	1	1541
REACTOME_INTERLEUKIN_6_SIGNALING	10	0.656	1.534	0.048	0.138	1	3168
REACTOME_NEGATIVE_REGULATION_OF_FGFR4_SIGNALING	21	0.549	1.534	0.026	0.137	1	2887
REACTOME_SIGNALING_BY_EGFR_IN_CANCER	20	0.550	1.534	0.043	0.137	1	770
REACTOME_SIGNALING_BY_PTK6	42	0.478	1.534	0.015	0.136	1	2804
REACTOME_SHC_MEDIATED_CASCADE_FGFR3	9	0.680	1.534	0.039	0.136	1	1208
REACTOME_RESPONSE_OF_MTB_TO_PHAGOCYTOSIS	21	0.554	1.533	0.041	0.136	1	3275
REACTOME_SIGNALING_BY_GPCR	314	0.351	1.530	0.000	0.138	1	1725
REACTOME_MAP2K_AND_MAPK_ACTIVATION	35	0.478	1.530	0.035	0.137	1	3589
REACTOME_OLFACTORY_SIGNALING_PATHWAY	8	0.712	1.530	0.031	0.137	1	308
REACTOME_FORMATION_OF_FIBRIN_CLOT_CLOTTING_CASCADE	18	0.565	1.528	0.054	0.139	1	301
REACTOME_ION_TRANSPORT_BY_P_TYPE_ATPASES	36	0.484	1.527	0.040	0.140	1	1306
REACTOME_IONOTROPIC_ACTIVITY_OF_KAINATE_RECEPTORS	6	0.771	1.526	0.025	0.140	1	2305
REACTOME_NEGATIVE_REGULATION_OF_FGFR2_SIGNALING	20	0.550	1.522	0.050	0.144	1	2887
REACTOME_FGFR3B_LIGAND_BINDING_AND_ACTIVATION	3	0.905	1.518	0.020	0.149	1	1208
REACTOME_CD28_DEPENDENT_VAV1_PATHWAY	8	0.693	1.517	0.035	0.150	1	3687
REACTOME_TFAP2_AP_2_FAMILY_REGULATES_TRANSCRIPTION_OF_GROWTH_FACTORS_AND_THEIR_RECEPTORS	7	0.728	1.513	0.048	0.153	1	750
REACTOME_FGFR1_MODULATION_OF_FGFR1_SIGNALING	5	0.786	1.510	0.028	0.156	1	1108
REACTOME_ACETYLCHOLINE_BINDING_AND_DOWNSTREAM_EVENTS	5	0.799	1.508	0.030	0.159	1	236
REACTOME_AKT_PHOSPHORYLATED_TARGETS_IN_THE_NUCLEUS	10	0.664	1.508	0.053	0.158	1	714

REACTOME_METABOLISM_OF_CARBOHYDRATES	221	0.357	1.508	0.000	0.157	1	2265
REACTOME_NEGATIVE_REGULATION_OF_FGFR3_SIGNALING	20	0.553	1.506	0.036	0.158	1	2887
REACTOME_PRESYNAPTIC_DEPOLARIZATION_AND_CALCIUM_CHANNEL_OPENING	4	0.836	1.504	0.022	0.160	1	210
REACTOME_ESR_MEDIATED_SIGNALING	142	0.375	1.503	0.003	0.161	1	2057
REACTOME_DEFECTS_OF_CONTACT_ACTIVATION_SYSTEM_CAS_AND_KALLIKREIN_KININ_SYSTEM_KKS	8	0.697	1.502	0.055	0.161	1	892
REACTOME_TRANSMISSION_ACROSS_CHEMICAL_SYNAPSES	139	0.377	1.498	0.006	0.165	1	2466
REACTOME_PECAM1_INTERACTIONS	10	0.647	1.498	0.059	0.165	1	782
REACTOME_POTASSIUM_CHANNELS	33	0.494	1.496	0.024	0.166	1	1819
REACTOME_RUNX2_REGULATES_OSTEOBLAST_DIFFERENTIATION	18	0.555	1.494	0.047	0.169	1	3195
REACTOME_DISEASES_ASSOCIATED_WITH_OGLYCOSYLATION_OF_PROTEINS	36	0.475	1.491	0.043	0.171	1	1369
REACTOME_COPI_DEPENDENT_GOLGI_TO_ER_RETROGRADE_TRAFFIC	88	0.401	1.491	0.014	0.171	1	2894
REACTOME_CASPASE_ACTIVATION_VIA_DEPENDENCE_RECEPTORS_IN_THE_ABSENCE_OF_LIGAND	7	0.713	1.491	0.043	0.171	1	464
REACTOME_COPII_MEDIATED_VESICLE_TRANSPORT	66	0.423	1.490	0.017	0.170	1	3709
REACTOME_ERYTHROPOIETIN_ACTIVATES_RAS	13	0.596	1.487	0.048	0.175	1	770
REACTOME_LGI_ADAM_INTERACTIONS	6	0.756	1.484	0.039	0.178	1	210
REACTOME_TFAP2_AP_2_FAMILY_REGULATES_TRANSCRIPTION_OF_CELL_CYCLE_FACTORS	5	0.774	1.483	0.055	0.178	1	1978
REACTOME_IRON_UPTAKE_AND_TRANSPORT	47	0.451	1.483	0.023	0.177	1	3330
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_CYTOCHROME_C_RELEASE	18	0.549	1.480	0.041	0.181	1	704
REACTOME_CATION_COUPLED_CHLORIDE_COTRANSPORTERS	4	0.839	1.479	0.049	0.182	1	1126
REACTOME_NEGATIVE_REGULATION_OF_FGFR1_SIGNALING	20	0.539	1.477	0.043	0.183	1	2887

REACTOME_RUNX3_REGULATES_YAP1_MEDIATED_TRANSCRIPTION	8	0.673	1.477	0.062	0.182	1	2313
REACTOME_DEFECTIVE_CHST14_CAUSES_EDS_MUSCULOCONTRACTURAL_TYPE	3	0.879	1.477	0.033	0.182	1	1541
REACTOME_EXTRINSIC_PATHWAY_OF_FIBRIN_CLOT_FORMATION	4	0.823	1.476	0.046	0.183	1	301
REACTOME_SIGNALING_BY_FGF_R	65	0.422	1.473	0.031	0.186	1	3842
REACTOME_LISTERIA_MONOCYTOGENES_ENTRY_INTO_HOST_CELLS	18	0.550	1.473	0.061	0.186	1	3855
REACTOME_P75NTR_REGULATES_AXONOGENESIS	5	0.768	1.472	0.056	0.186	1	1327
REACTOME_ERKS_ARE_INACTIVATED	13	0.587	1.471	0.085	0.186	1	2887
REACTOME_EPH_EPHRIN_SIGNALING	79	0.400	1.470	0.014	0.186	1	3499
REACTOME_INTERLEUKIN_2_FAMILY_SIGNALING	26	0.492	1.468	0.053	0.189	1	3342
REACTOME_CARBOXYTERMINAL_POST_TRANSLATIONAL_MODIFICATIONS_OF_TUBULIN	26	0.498	1.466	0.033	0.191	1	2113
REACTOME_PTK6_PROMOTES_HIF1A_STABILIZATION	3	0.900	1.463	0.024	0.194	1	860
REACTOME_UPTAKE_AND_FUNCTION_OF_ANTHRAX_TOXINS	11	0.623	1.462	0.057	0.196	1	3513
REACTOME_EPHB_MEDIATED_FORWARD_SIGNALING	39	0.451	1.462	0.035	0.195	1	3499
REACTOME_SIGNALING_BY_EGFR	42	0.450	1.458	0.039	0.200	1	4119
REACTOME_RUNX3_REGULATES_P14_ARF	10	0.637	1.455	0.068	0.204	1	3249
REACTOME_INTERLEUKIN_12_FAMILY_SIGNALING	42	0.440	1.454	0.044	0.204	1	3443
REACTOME_L1CAM_INTERACTIONS	84	0.402	1.452	0.022	0.206	1	2113
REACTOME_SIGNALING_BY_FGF_R4	30	0.487	1.447	0.049	0.213	1	2887
REACTOME_DEFECTIVE_CHST3_CAUSES_SEDCJD	3	0.879	1.445	0.038	0.216	1	1541
REACTOME_LEISHMANIA_INFECTION	122	0.369	1.442	0.017	0.220	1	3050
REACTOME_FCGAMMA_RECEPTOR_FCGR_DEPENDENT_PHAGOCYTOSIS	71	0.402	1.441	0.016	0.220	1	3192
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_DIFFERENTIATION_OF_MYELOID_CELLS	5	0.745	1.438	0.071	0.224	1	3249

REACTOME_TRANSCRIPTIONAL_ACTIVITY_OF_SMAD2_SMAD3_SMAD4_HETEROTRIMER	43	0.434	1.437	0.041	0.224	1	3842
REACTOME_SIGNALING_BY_TYROSINE_1_INSULIN_LIKE_GROWTH_FACTOR_1_RECEPTOR_IGF1R	31	0.468	1.437	0.064	0.224	1	1997
REACTOME_VITAMIN_C_ASCORBATE_METABOLISM	7	0.691	1.431	0.066	0.233	1	2297
REACTOME_ADVANCED_GLYCOSYLATION_ENDPRODUCT_RECEPTOR_SIGNALING	10	0.623	1.430	0.077	0.233	1	3602
REACTOME_RHO_GTPASE_EFFECTORS	241	0.338	1.429	0.010	0.234	1	3589
REACTOME_PLATELET_SENSITIZATION_BY_LDL	13	0.580	1.428	0.103	0.235	1	3235
REACTOME_SEMA4D_INDUCED_CELL_MIGRATION_AND_GROWTH_CONE_COLLAPSE	19	0.519	1.428	0.084	0.234	1	3574
REACTOME_REGULATION_OF_CYTOSKELETAL_REMODELING_AND_CELL_SPREADING_BY_IPP_COMPLEX_COMPONENTS	7	0.679	1.427	0.099	0.234	1	3882
REACTOME_SIGNALING_BY_MET	63	0.404	1.427	0.040	0.234	1	3855
REACTOME_BIOSYNTHESIS_OF_MARESINS	2	0.964	1.426	0.008	0.234	1	243
REACTOME_AGGREPHAGY	32	0.467	1.424	0.061	0.236	1	2317
REACTOME_NCAM1_INTERACTIONS	15	0.552	1.424	0.090	0.236	1	1511
REACTOME_ONCOGENIC_MAPK_SIGNALING	74	0.394	1.423	0.023	0.237	1	2887
REACTOME_ADRENOCEPTORS	2	0.948	1.420	0.022	0.241	1	172
REACTOME_RHO_GTPASES_ACTIVATE_PAKS	19	0.519	1.419	0.079	0.242	1	3546
REACTOME_HSP90_CHAPERONE_CYCLE_FOR_STEROID_HORMONE_RECEPTORS_SHR	44	0.432	1.419	0.064	0.241	1	2113
REACTOME_VISUAL_PHOTOTRANSDUCTION	47	0.427	1.416	0.048	0.245	1	1511
REACTOME_ION_HOMEOSTASIS	32	0.458	1.415	0.055	0.246	1	2074
REACTOME_DEFECTIVE_FACTOR_VIII_CAUSES_HEMOPHILIA_A	6	0.704	1.413	0.089	0.248	1	892
REACTOME_ABERRANT_REGULATION_OF_MITOTIC_G1_S_TRANSITION_IN_CANCER_DUE_TO_RB1_DEFECTS	16	0.544	1.412	0.071	0.249	1	1052
REACTOME_RUNX2_REGULATES_GENES_INVOLVED_IN_CELL_MIGRATION	6	0.706	1.407	0.092	0.256	1	3080
REACTOME_ACTIVATION_OF_RAC1	10	0.617	1.406	0.110	0.256	1	3342

REACTOME_TRANSPORT_OF_FATTY_ACIDS	2	0.955	1.406	0.021	0.257	1	383
REACTOME_SYNTHESIS_OF_ACTIVE_UBIQUITIN_ROLES_OF_E1_AND_E2_ENZYMES	30	0.469	1.405	0.066	0.256	1	4023
REACTOME_SIGNALING_BY_NUCLEAR_CLEAR_RECEPTORS	195	0.339	1.404	0.013	0.257	1	2057
REACTOME_IRS_MEDIATED_SIGNALING	29	0.462	1.402	0.063	0.260	1	1997
REACTOME_GOLGI_TO_ER_RETROGRADE_TRANSPORT	118	0.361	1.401	0.030	0.260	1	1883
REACTOME_NADE_MODULATES_DEATH_SIGNALING	5	0.751	1.400	0.083	0.261	1	4
REACTOME_FGFR2_LIGAND_BINDING_AND_ACTIVATION	5	0.736	1.400	0.092	0.260	1	1208
REACTOME_EARLY_PHASE_OF_HIV_LIFE_CYCLE	13	0.575	1.396	0.093	0.266	1	2792
REACTOME_PHOSPHOLIPASE_C_MEDIATED_CASCADE_FGFR4	5	0.743	1.395	0.090	0.268	1	1208
REACTOME_PI_3K_CASCADE_FGFR4	9	0.627	1.392	0.099	0.271	1	1208
REACTOME_SMAD2_SMAD3_SMAD4_HETEROTRIMER_REGULATES_TRANSCRIPTION	31	0.455	1.391	0.067	0.272	1	2159
REACTOME_ACTIVATION_OF_THE_TFAP2_AP_2_FAMILY_OF_TRANSCRIPTION_FACTORS	9	0.615	1.391	0.091	0.271	1	234
REACTOME_REGULATION_OF_GLYCOLYSIS_BY_FRUCTOSE_2_6_BISPHOSPHATE_METABOLISM	10	0.603	1.390	0.103	0.271	1	2960
REACTOME_SIGNALING_BY_FGF_R2	57	0.403	1.389	0.047	0.272	1	4118
REACTOME_SHC_MEDIATED_CASCADE_FGFR1	9	0.621	1.386	0.100	0.276	1	4118
REACTOME_COMMON_PATHWAY_OF_FIBRIN_CLOT_FORMATION	11	0.576	1.386	0.109	0.275	1	301
REACTOME_RSK_ACTIVATION	7	0.663	1.386	0.094	0.274	1	2887
REACTOME_FGFR1_LIGAND_BINDING_AND_ACTIVATION	3	0.843	1.385	0.058	0.275	1	1997
REACTOME_RUNX2_REGULATES_CHONDROCYTE_MATURATION	3	0.832	1.385	0.078	0.275	1	1966
REACTOME_DERMATAN_SULFATE_BIOSYNTHESIS	5	0.732	1.384	0.101	0.276	1	1541
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_G1_CELL_CYCLE_ARREST	13	0.551	1.384	0.113	0.275	1	462
REACTOME_INTRACELLULAR_SIGNALING_BY_SECOND_MESSENGERS	247	0.326	1.383	0.006	0.276	1	2742
REACTOME_EPHA_MEDIATED_GROWTH_CONE_COLLAPSE	23	0.481	1.382	0.091	0.277	1	1916

REACTOME_TBC_RABGAPS	39	0.421	1.381	0.082	0.276	1	2814
REACTOME_TOLL_LIKE_RECEPTOR_CASCADES	121	0.355	1.381	0.031	0.277	1	2317
REACTOME_CHYLOMICRON_CLEARANCE	4	0.763	1.380	0.102	0.276	1	1141
REACTOME_PI_3K_CASCADE_FGFR2	8	0.624	1.377	0.115	0.282	1	1208
REACTOME_SIGNALING_BY_ACTIVIN	10	0.592	1.375	0.105	0.284	1	1697
REACTOME_SPHINGOLIPID_DENOVO_BIOSYNTHESIS	35	0.440	1.375	0.072	0.283	1	2947
REACTOME_SIGNALING_BY_RHO_GTPASES	348	0.313	1.374	0.001	0.283	1	2632
REACTOME_SUMOYLATION_OF_TRANSCRIPTION_COFACTORS	43	0.412	1.374	0.064	0.283	1	3604
REACTOME_SIGNALLING_TO_RAS	17	0.528	1.373	0.102	0.284	1	4526
REACTOME_ACTIVATION_OF_MATRIX_METALLOPROTEINASES	14	0.550	1.370	0.118	0.288	1	1528
REACTOME_PI5P_REGULATES_TP53_ACETYLATION	9	0.615	1.369	0.117	0.288	1	2725
REACTOME_RUNX1_AND_FOXP3_CONTROL_THE_DEVELOPMENT_OF_REGULATORY_T_LYMPHOCYTES_TREGS	5	0.731	1.369	0.106	0.288	1	3426
REACTOME_IRS_ACTIVATION	4	0.756	1.369	0.106	0.287	1	570
REACTOME_NUCLEAR_ENVELOPE_NE_REASSEMBLY	68	0.382	1.368	0.043	0.288	1	2949
REACTOME_CARGO_RECOGNITION_FOR_CLATHRIN_MEDIATED_ENDOCYTOSIS	78	0.376	1.367	0.052	0.288	1	3953
REACTOME_DOWNSTREAM_SIGNALING_OF_ACTIVATED_FGFR4	16	0.511	1.366	0.101	0.290	1	1208
REACTOME_CLASS_B_2_SECRETIN_FAMILY_RECEPTORS	38	0.424	1.365	0.073	0.291	1	1257
REACTOME_CROSS_PRESENTATION_OF_PARTICULATE_EXOGENOUS_ANTIGENS_PHAGOSOMES	3	0.813	1.364	0.101	0.291	1	1967
REACTOME_INTERLEUKIN_21_SIGNALING	6	0.686	1.358	0.132	0.302	1	2771
REACTOME_SIGNALING_BY_NTRK3_TRKC	15	0.530	1.357	0.110	0.303	1	770
REACTOME_SIGNALING_BY_NODAL	12	0.573	1.356	0.112	0.303	1	1367
REACTOME_EGR2_AND_SOX10_MEDIATED_INITIATION_OF_SCHWANN_CELL_MYELINATION	24	0.472	1.352	0.101	0.309	1	1320
REACTOME_SUPPRESSION_OF_APOPTOSIS	6	0.681	1.352	0.122	0.309	1	3275
REACTOME_PHASE_0_RAPID_DEPOLARISATION	16	0.517	1.351	0.122	0.310	1	2906

REACTOME_CHYLOMICRON_REMODELING	1	0.992	1.350	0.020	0.311	1	99
REACTOME_PI_3K_CASCADE_FR3	8	0.632	1.349	0.109	0.311	1	1208
REACTOME_REGULATION_OF_IFNG_SIGNALING	13	0.552	1.348	0.110	0.313	1	4537
REACTOME_INTRINSIC_PATHWAY_OF_FIBRIN_CLOT_FORMATI ON	10	0.584	1.346	0.144	0.316	1	301
REACTOME_METABOLISM_OF_FAT_SOLUBLE_VITAMINS	27	0.459	1.345	0.120	0.316	1	1511
REACTOME_DEFECTIVE_CHSY1_CAUSES_TPBS	3	0.816	1.344	0.097	0.318	1	1541
REACTOME_NR1H3_NR1H2_REGULATE_GENE_EXPRESSION_LINKED_TO_CHOLESTEROL_TRANSPORT_AND_EFFLUX	31	0.434	1.343	0.090	0.318	1	1671
REACTOME_TRANSPORT_OF_SMALL_MOLECULES	455	0.298	1.342	0.001	0.320	1	1863
REACTOME_INTERLEUKIN_2_SIGNALING	7	0.651	1.341	0.130	0.320	1	971
REACTOME_KINESINS	50	0.398	1.341	0.062	0.320	1	1025
REACTOME_P38MAPK_EVENTS	13	0.542	1.339	0.112	0.322	1	4927
REACTOME_REGULATION_OF_COMMISSURAL_AXON_PATHFINDING_BY_SLIT_AND_ROBO	4	0.749	1.333	0.113	0.332	1	2948
REACTOME_SYNTHESIS_OF_PIP3_AT_THE_PLASMA_MEMBRANE	45	0.403	1.333	0.085	0.331	1	2725
REACTOME_SIGNALING_BY_ERBB4	38	0.419	1.333	0.100	0.332	1	1375
REACTOME_MHC_CLASS_II_ANTIGEN_PRESENTATION	95	0.358	1.331	0.061	0.334	1	2913
REACTOME_FGFR2C_LIGAND_BINDING_AND_ACTIVATION	2	0.905	1.328	0.080	0.339	1	1208
REACTOME_ACTIVATION_OF_THE_PHOTOTRANSDUCTION_CASCADE	2	0.867	1.327	0.117	0.339	1	254
REACTOME_ACTIVATED_NTRK3_SIGNALS_THROUGH_RAS	7	0.636	1.327	0.153	0.340	1	770
REACTOME_INLA_MEDIATED_ENTRY_OF_LISTERIA_MONOCYTOGENES_INTO_HOST_CELLS	9	0.597	1.326	0.147	0.339	1	3842
REACTOME_UPTAKE_AND_FUNCTION_OF_DIPHTEHRIA_TOXIN	6	0.676	1.326	0.140	0.338	1	1562
REACTOME_PHASE_3_RAPID_REPOLARISATION	4	0.745	1.326	0.137	0.338	1	446
REACTOME_PRE_NOTCH_PROCESSING_IN_GOLGI	16	0.500	1.325	0.141	0.338	1	2606
REACTOME_NEGATIVE_REGULATION_OF_MET_ACTIVITY	18	0.482	1.325	0.146	0.337	1	4537
REACTOME_RUNX1_REGULATES_GENES_INVOLVED_IN_MEGAK	44	0.396	1.323	0.107	0.340	1	1204

ARYOCYTE_DIFFERENTIATION_A ND_PLATELET_FUNCTION REACTOME_ACTIVATED_TAK1_ MEDIATES_P38_MAPK_ACTIVAT ION	23	0.460	1.322	0.115	0.342	1	2889
REACTOME_SIGNALING_BY_FGF R3	30	0.436	1.320	0.114	0.344	1	2887
REACTOME_LAMININ_INTERACT IONS	22	0.457	1.320	0.124	0.344	1	1462
REACTOME_SUPPRESSION_OF_P HAGOSOMAL_MATURATION	12	0.547	1.318	0.144	0.346	1	2653
REACTOME_INFLAMMASOMES	12	0.562	1.316	0.148	0.349	1	2185
REACTOME_DEFECTIVE_FACTOR _IX_CAUSES_HEMOPHILIA_B	3	0.790	1.316	0.135	0.349	1	301
REACTOME_PTK6_REGULATES_R HO_GTPASES_RAS_GTPASE_AN D_MAP_KINASES	13	0.529	1.315	0.156	0.350	1	4118
REACTOME_ASSEMBLY_OF_ACTI VE_LPL_AND_LIPC_LIPASE_COM PLEXES	11	0.563	1.315	0.148	0.349	1	1248
REACTOME_PHOSPHOLIPASE_C_ MEDIATED_CASCADE_FGFR2	4	0.751	1.313	0.149	0.351	1	1208
REACTOME_FRS_MEDIATED_FG FR4_SIGNALING	12	0.536	1.311	0.151	0.355	1	1208
REACTOME_SIGNALING_BY_FGF R_IN_DISEASE	48	0.390	1.310	0.100	0.355	1	3012
REACTOME_RAS_ACTIVATION_U PON_CA2_INFLUX_THROUGH_N MDA_RECEPTOR	14	0.509	1.308	0.140	0.358	1	2027
REACTOME_INTERLEUKIN_20_F AMILY_SIGNALING	16	0.486	1.307	0.140	0.359	1	146
REACTOME_DOWNSTREAM_SIG NALING_OF_ACTIVATED_FGFR2	15	0.503	1.306	0.135	0.361	1	1208
REACTOME_BIOSYNTHESIS_OF_ MARESIN_LIKE_SPMS	1	0.981	1.306	0.045	0.360	1	243
REACTOME_CREATINE_METABO LISM	5	0.689	1.305	0.169	0.361	1	889
REACTOME_DOWNSTREAM_SIG NALING_OF_ACTIVATED_FGFR3	15	0.509	1.303	0.133	0.363	1	1208
REACTOME_MYOGENESIS	16	0.501	1.303	0.127	0.362	1	3463
REACTOME_GAP_JUNCTION_DE GRADATION	11	0.550	1.303	0.156	0.361	1	2601
REACTOME_MET_ACTIVATES_R AS_SIGNALING	9	0.585	1.303	0.169	0.361	1	4118
REACTOME_RHO_GTPASE_CYCL E	117	0.337	1.301	0.051	0.363	1	2102
REACTOME_NUCLEAR_SIGNALIN G_BY_ERBB4	20	0.478	1.300	0.147	0.364	1	1375
REACTOME_PROTEIN_FOLDING	75	0.361	1.300	0.078	0.363	1	3770
REACTOME_NEF_AND_SIGNAL_ TRANSDUCTION	4	0.726	1.299	0.156	0.365	1	2981

REACTOME_THYROXINE_BIOSYNTHESIS	1	0.965	1.296	0.065	0.370	1	443
REACTOME_SIGNALING_BY_MODERATE_KINASE_ACTIVITY_BRAF_MUTANTS	38	0.407	1.296	0.128	0.370	1	3589
REACTOME_SUMOYLATION_OF_TRANSCRIPTION_FACTORS	19	0.466	1.296	0.134	0.369	1	3483
REACTOME_ACTIVATED_NTRK3_SIGNALS_THROUGH_PI3K	5	0.704	1.296	0.164	0.368	1	226
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_DIFFERENTIATION_OF_KERATINOCYTES	7	0.615	1.295	0.169	0.369	1	686
REACTOME_MET_INTERACTS_WITH_TNS_PROTEINS	4	0.731	1.295	0.171	0.368	1	2143
REACTOME_CHOLINE_CATABOLISM	4	0.729	1.295	0.184	0.367	1	353
REACTOME_VEGF_LIGAND_RECEPTOR_INTERACTIONS	3	0.783	1.294	0.164	0.368	1	1621
REACTOME_PLATELET_HOMEOSTASIS	45	0.391	1.293	0.133	0.369	1	2618
REACTOME_EGFR_TRANSACTIVATION_BY_GASTRIN	7	0.618	1.291	0.181	0.372	1	102
REACTOME_PD_1_SIGNALING	6	0.636	1.291	0.194	0.371	1	4442
REACTOME_NOTCH2_ACTIVATION_AND_TRANSMISSION_OF_SIGNAL_TO_THE_NUCLEUS	20	0.457	1.289	0.157	0.373	1	1273
REACTOME_RHO_GTPASES_ACTIVATE_PKNS	39	0.393	1.288	0.130	0.375	1	2597
REACTOME_VLDL_ASSEMBLY	2	0.862	1.287	0.140	0.376	1	685
REACTOME_DISEASES_OF_METABOLISM	165	0.319	1.287	0.054	0.375	1	1541
REACTOME_ASPARAGINE_N_LINKED_GLYCOSYLATION	262	0.303	1.287	0.033	0.374	1	3899
REACTOME_CONSTITUTIVE_SIGNALING_BY_AKT1_E17K_IN_CANCER	26	0.434	1.284	0.155	0.378	1	714
REACTOME_MAPK3_ERK1_ACTIVATION	9	0.568	1.283	0.182	0.379	1	3168
REACTOME_ABC_TRANSPORTERS_IN_LIPID_HOMEOSTASIS	9	0.565	1.283	0.173	0.380	1	3568
REACTOME_SHC1_EVENTS_IN_ERBB2_SIGNALING	15	0.500	1.280	0.189	0.385	1	1170
REACTOME_MET_ACTIVATES_PT_K2_SIGNALING	20	0.471	1.279	0.170	0.385	1	1146
REACTOME_THE_ROLE_OF_NEF_IN_HIV_1_REPLICATION_AND_DISEASE_PATHOGENESIS	22	0.462	1.279	0.160	0.385	1	2981
REACTOME_INTERLEUKIN_RECEPTOR_SHC_SIGNALING	15	0.493	1.278	0.155	0.385	1	3687
REACTOME_SPRY_REGULATION_OF_FGF_SIGNALING	16	0.495	1.277	0.163	0.386	1	3842

REACTOME_SIGNALING_BY_ERYTHROPOIETIN	21	0.462	1.274	0.152	0.391	1	3288
REACTOME_PTK6_REGULATES_RTKS_AND_THEIR_EFFECTORS_AKT1_AND_DOK1	9	0.559	1.273	0.183	0.393	1	3842
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_RUNX1	162	0.314	1.273	0.065	0.392	1	1204
REACTOME_INLB_MEDIATED_ENTRY_OF_LISTERIA_MONOCYTOGENES_INTO_HOST_CELL	13	0.513	1.273	0.203	0.392	1	3855
REACTOME_EPH_EPHRIN_MEDIATED_REPULSION_OF_CELLS	42	0.395	1.272	0.126	0.392	1	2601
REACTOME_FCERI_MEDIATED_CLASS_2_MOBILIZATION	23	0.442	1.271	0.160	0.392	1	937
REACTOME_CLASS_C_3_METABOTROPIC_Glutamate_PHEROMONE_RECEPTORS	3	0.769	1.271	0.161	0.393	1	266
REACTOME_HCMV_EARLY_EVENTS	72	0.360	1.270	0.108	0.393	1	2113
REACTOME_THROMBIN_SIGNALING_THROUGH_PROTEINASE_ACTIVATED_RECEPTORS_PARS	19	0.477	1.270	0.170	0.393	1	1425
REACTOME_MET_ACTIVATES_RAP1_AND_RAC1	9	0.568	1.269	0.185	0.393	1	3687
REACTOME_IRE1ALPHA_ACTIVATES_CHAPERONES	47	0.380	1.268	0.125	0.394	1	2724
REACTOME_SUMO_IS_PROTEOLYTICALLY_PROCESSED	6	0.626	1.268	0.204	0.394	1	4753
REACTOME_FGFR1C_LIGAND_BINDING_AND_ACTIVATION	2	0.843	1.266	0.150	0.397	1	1997
REACTOME_CROSSLINKING_OF_COLLAGEN_FIBRILS	9	0.553	1.265	0.175	0.398	1	611
REACTOME_PROSTANOID_LIGAND_RECEPTORS	1	0.949	1.263	0.102	0.400	1	652
REACTOME_SYNTHESIS_OF_PEP	10	0.543	1.262	0.188	0.402	1	2886
REACTOME_IMMUNOREGULATORY_INTERACTIONS_BETWEEN_A_LYMPHOID_AND_A_NON_LYMPHOID_CELL	29	0.414	1.261	0.168	0.404	1	2991
REACTOME_REGULATION_OF_SIGNALING_BY_CBL	20	0.450	1.259	0.171	0.407	1	2159
REACTOME_RUNX3_REGULATES_BCL2L1_BIM_TRANSCRIPTION	5	0.658	1.257	0.197	0.410	1	1367
REACTOME_DEFECTIVE_C1GALT1C1_CAUSES_TN_POLYAGGLUTINATION_SYNDROME_TNPS	5	0.669	1.257	0.184	0.409	1	1156
REACTOME_SURFACTANT_METABOLISM	11	0.536	1.256	0.174	0.409	1	1592
REACTOME_PHOSPHORYLATION_SITE_MUTANTS_OF_CTNNB1_ARE_NOT_TARGETED_TO_THE_PROTEASOME_BY_THE_DESTRUCTIVE_COMPLEX	15	0.482	1.255	0.200	0.411	1	4060

REACTOME_LYSOSOME_VESICLE_BIOGENESIS	31	0.411	1.255	0.162	0.410	1	4650
REACTOME_P75NTR_RECRUITS_SIGNALLING_COMPLEXES	12	0.502	1.255	0.190	0.409	1	3842
REACTOME_POST_TRANSLATIONAL_MODIFICATION_SYNTHESIS_OF_GPI_ANCHORED_PROTEINS	40	0.391	1.254	0.146	0.409	1	872
REACTOME_FRS_MEDIATED_FG_FR2_SIGNALING	11	0.527	1.254	0.213	0.408	1	1208
REACTOME_LONG_TERM_POTENTIATION	11	0.519	1.253	0.191	0.409	1	2027
REACTOME_FRS_MEDIATED_FG_FR3_SIGNALING	11	0.536	1.252	0.215	0.411	1	1208
REACTOME_DSCAM_INTERACTIONS	7	0.600	1.251	0.211	0.412	1	3067
REACTOME_REGULATION_OF_TLR_BY_ENDOGENOUS_LIGAND	5	0.654	1.251	0.221	0.411	1	1424
REACTOME_UNBLOCKING_OF_NMDA_RECEPTORS_GLUTAMATE_BINDING_AND_ACTIVATION	10	0.540	1.251	0.207	0.411	1	2027
REACTOME_SIGNAL_REGULATORY_PROTEIN_FAMILY_INTERACTIONS	10	0.541	1.248	0.190	0.415	1	4442
REACTOME_RAF_ACTIVATION	32	0.412	1.248	0.158	0.416	1	4224
REACTOME_CIRCADIAN_CLOCK	67	0.351	1.247	0.129	0.415	1	3842
REACTOME_PHENYLALANINE_AND_TYROSINE_METABOLISM	7	0.595	1.247	0.233	0.416	1	3543
REACTOME_NETRIN_MEDIATED_REPULSION_SIGNALS	4	0.707	1.246	0.202	0.416	1	453
REACTOME_INTERLEUKIN_23_SIGNALING	5	0.661	1.246	0.230	0.415	1	31
REACTOME_DISEASES_OF_PROGRAMMED_CELL_DEATH	23	0.436	1.246	0.180	0.414	1	673
REACTOME_INTERLEUKIN_3_INTERLEUKIN_5_AND_GM-CSF_SIGNALING	34	0.394	1.246	0.158	0.414	1	4643
REACTOME_FACTORS_INVOLVED_IN_MEGAKARYOCYTE_DEVELOPMENT_AND_PLATELET_PRODUCTION	117	0.319	1.245	0.090	0.415	1	2113
REACTOME_LYSOSPHINGOLIPID_AND_LPA_RECEPTORS	6	0.621	1.245	0.220	0.414	1	1478
REACTOME_SUMOYLATION_OF_IMMUNE_RESPONSE_PROTEINS	11	0.528	1.243	0.198	0.417	1	5290
REACTOME_MET_PROMOTES_CELL_MOTILITY	30	0.407	1.243	0.180	0.416	1	3341
REACTOME_CREATION_OF_C4_AND_C2_ACTIVATORS	2	0.838	1.240	0.190	0.421	1	2064
REACTOME_ESTROGEN_DEPENDENT_GENE_EXPRESSION	93	0.333	1.238	0.121	0.423	1	3542
REACTOME_CYCLIN_D_ASSOCIATED_EVENTS_IN_G1	46	0.376	1.236	0.140	0.428	1	2397

REACTOME_SIGNALING_BY_MRAS_COMPLEX_MUTANTS	8	0.567	1.235	0.213	0.429	1	3484
REACTOME_STIMULI_SENSING_CHANNELS	57	0.355	1.232	0.148	0.434	1	2203
REACTOME_RNA_POLYMERASE_III_CHAIN_ELONGATION	18	0.458	1.232	0.200	0.433	1	1742
REACTOME_RUNX3_REGULATES_IMMUNE_RESPONSE_AND_CELL_MIGRATION	2	0.809	1.231	0.189	0.433	1	1966
REACTOME_ONCOGENE_INDUCED_SENESCENCE	33	0.402	1.231	0.181	0.433	1	3170
REACTOME_ENOS_ACTIVATION	10	0.534	1.231	0.225	0.432	1	1167
REACTOME_FGFR1B_LIGAND_BINDING_AND_ACTIVATION	2	0.843	1.229	0.194	0.436	1	1997
REACTOME_PROLONGED_ERK_ACTIVATION_EVENTS	12	0.507	1.227	0.208	0.438	1	3513
REACTOME_ACTIVATED_NTRK2_SIGNALS_THROUGH_CDK5	5	0.625	1.224	0.259	0.443	1	2678
REACTOME_NEF_MEDIATED_CD4_DOWN_REGULATION	9	0.548	1.223	0.235	0.446	1	2653
REACTOME_ACTIVATION_OF_BH3_ONLY_PROTEINS	29	0.405	1.222	0.194	0.446	1	3484
REACTOME_ELECTRIC_TRANSMISSION_ACROSS_GAP_JUNCTIONS	2	0.826	1.222	0.181	0.445	1	2209
REACTOME_SIGNALING_BY_KIT_IN_DISEASE	19	0.451	1.222	0.213	0.444	1	4612
REACTOME_G_ALPHA_I_SIGNALING_EVENTS	145	0.307	1.222	0.103	0.444	1	3414
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_CELL_CYCLE_GENES	48	0.362	1.220	0.155	0.446	1	1074
REACTOME_APOBEC3G_MEDIATED_RESISTANCE_TO_HIV_1_INFECTION	5	0.638	1.220	0.222	0.445	1	3854
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_WNT_SIGNALING	4	0.678	1.220	0.234	0.445	1	3426
REACTOME_NEF_MEDIATES_DOWN_MODULATION_OF_CELL_SURFACE_RECEPTORS_BY_RECRUITING_THEM_TO_CLATHRIN_ADAPTERS	19	0.450	1.219	0.213	0.447	1	2755
REACTOME_TRAF6_MEDIATED_INDUCION_OF_TAK1_COMPLEX_WITHIN_TLR4_COMPLEX	14	0.487	1.218	0.228	0.447	1	4190
REACTOME_INTERLEUKIN_27_SIGNALING	8	0.564	1.218	0.245	0.446	1	3168
REACTOME_VEGFR2_MEDIATED_VASCULAR_PERMEABILITY	23	0.425	1.216	0.208	0.450	1	3080
REACTOME_SOS_MEDIATED_SIGNALING	7	0.591	1.215	0.243	0.450	1	4118

REACTOME_NRAGE_SIGNALS_D EATH_THROUGH_JNK	52	0.359	1.215	0.162	0.449	1	615
REACTOME_SELECTIVE_AUTOPH AGY	69	0.338	1.214	0.169	0.451	1	2317
REACTOME_TRANSPORT_OF_N UCLEOTIDE_SUGARS	9	0.531	1.214	0.227	0.451	1	1636
REACTOME_G_ALPHA_12_13_SI GNALLING_EVENTS	60	0.348	1.213	0.163	0.450	1	1916
REACTOME_RECEPTOR_MEDIAT ED_MITOPHAGY	11	0.514	1.213	0.215	0.449	1	4201
REACTOME_UNFOLDED_PROTEI N_RESPONSE_UPR_	87	0.322	1.210	0.143	0.455	1	1783
REACTOME_ESTROGEN_STIMUL ATED_SIGNALING_THROUGH_P RKCZ	6	0.613	1.209	0.247	0.455	1	4927
REACTOME_REGULATED_PROTE OLYSIS_OF_P75NTR	11	0.505	1.209	0.248	0.456	1	4
REACTOME_ROBO_RECEPTORS_ BIND_AKAP5	7	0.579	1.208	0.237	0.456	1	2206
REACTOME_OXIDATIVE_STRESS _INDUCED_SENESCENCE	72	0.334	1.208	0.165	0.455	1	3877
REACTOME_RNA_POLYMERASE_ III_TRANSCRIPTION_INITIATION_ FROM_TYPE_3_PROMOTER	28	0.401	1.208	0.196	0.455	1	2381
REACTOME_INTERLEUKIN_35_SI GNALLING	8	0.564	1.207	0.260	0.456	1	3168
REACTOME_ERYTHROPOIETIN_A CTIVATES_STAT5	6	0.615	1.207	0.246	0.455	1	255
REACTOME_CALCINEURIN_ACTI VATES_NFAT	9	0.548	1.207	0.261	0.454	1	4224
REACTOME_INACTIVATION_OF_ CDC42_AND_RAC1	6	0.606	1.206	0.264	0.454	1	2870
REACTOME_HIGHLY_CALCIUM_ PERMEABLE_NICOTINIC_ACETYL CHOLINE_RECEPTORS	4	0.665	1.204	0.252	0.457	1	236
REACTOME_DARPP_32_EVENTS	19	0.440	1.201	0.213	0.462	1	3697
REACTOME_THE_ROLE_OF_GTS E1_IN_G2_M_PROGRESSION_AF TER_G2_CHECKPOINT	69	0.334	1.201	0.172	0.462	1	2159
REACTOME_NR1H2_AND_NR1H 3_MEDIATED_SIGNALING	37	0.380	1.199	0.204	0.465	1	1765
REACTOME_GOLGI_CISTERNAE_ PERICENTRIOLAR_STACK_REORG ANIZATION	14	0.489	1.198	0.221	0.467	1	3062
REACTOME_RAS_SIGNALING_D OWNSTREAM_OF_NF1_LOSS_O F_FUNCTION_VARIANTS	7	0.589	1.198	0.269	0.466	1	4927
REACTOME_REMOVAL_OF_AMI NOTERMINAL_PROPEPTIDES_FR OM_GAMMA_CARBOXYLATED_ PROTEINS	7	0.561	1.197	0.264	0.467	1	1175
REACTOME_CELLULAR_SENESCE NCE	134	0.299	1.196	0.138	0.467	1	3641

REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_CELL_DEATH_GENES	37	0.379	1.196	0.194	0.466	1	2084
REACTOME_DOWNREGULATION_OF_ERBB2_ERBB3_SIGNALING	11	0.499	1.192	0.241	0.474	1	3842
REACTOME_CALNEXIN_CALRETICULIN_CYCLE	26	0.400	1.192	0.239	0.474	1	4248
REACTOME_NOSTRIN_MEDIATE_D_ENOS_TRAFFICKING	3	0.718	1.192	0.281	0.473	1	240
REACTOME_SLC_MEDIATED_TRANSMEMBRANE_TRANSPORT	132	0.305	1.190	0.144	0.475	1	1793
REACTOME_GAMMA_CARBOXYLATION_TRANSPORT_AND_AMINO_TERMINAL_CLEAVAGE_OF_PROTEINS	8	0.560	1.188	0.271	0.480	1	1175
REACTOME_HIGHLY_SODIUM_PERMEABLE_POSTSYNAPTIC_ACETYLCHOLINE_NICOTINIC_RECEPTORS	2	0.796	1.186	0.259	0.482	1	189
REACTOME_INTEGRATION_OF_POROVIRUS	9	0.529	1.185	0.271	0.484	1	3854
REACTOME_HIGHLY_CALCIIUM_PERMEABLE_POSTSYNAPTIC_NICOTINIC_ACETYLCHOLINE_RECEPTORS	4	0.665	1.184	0.280	0.485	1	236
REACTOME_CD28_CO_STIMULATION	28	0.403	1.180	0.232	0.493	1	3080
REACTOME_INTERLEUKIN_9_SIGNALING	5	0.633	1.179	0.284	0.494	1	2771
REACTOME_RHO_GTPASES_ACTIVATE_NADPH_OXIDASES	14	0.469	1.179	0.250	0.493	1	2887
REACTOME_P75NTR_SIGNALS_VIA_NF_KB	15	0.458	1.178	0.254	0.495	1	3842
REACTOME_CELLULAR_HEXOSE_TRANSPORT	12	0.486	1.176	0.273	0.499	1	1476
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_SEVERAL_ADDITIONAL_CELL_DEATH_GENES_WHOSE_SPECIFIC_ROLES_IN_P53_DEPENDENT_APOPTOSIS_REMAIN_UNCERTAIN	12	0.484	1.174	0.251	0.500	1	2084
REACTOME_ACROSOME_REACTION_AND_SPERM_OOCYTE_MBRANE_BINDING	1	0.877	1.174	0.234	0.500	1	1562
REACTOME_NF_KB_IS_ACTIVATED_AND_SIGNALS_SURVIVAL	12	0.483	1.172	0.277	0.504	1	4
REACTOME_GLUCURONIDATION	4	0.656	1.171	0.303	0.505	1	1222
REACTOME_ER_QUALITY_CONTROL_COMPARTMENT_ERQC	21	0.423	1.171	0.274	0.504	1	4248
REACTOME_UREA_CYCLE	5	0.620	1.170	0.311	0.504	1	824
REACTOME_O_LINKED_GLYCOSYLATION	61	0.332	1.170	0.213	0.504	1	2874

REACTOME_PYRIMIDINE_SALVAGE	8	0.528	1.169	0.288	0.504	1	1122
REACTOME_PTK6_REGULATES_CELL_CYCLE	6	0.579	1.168	0.295	0.507	1	1052
REACTOME_GLYCOGEN_SYNTHESIS	13	0.481	1.167	0.282	0.507	1	3842
REACTOME_DISEASES_OF_MITOTIC_CELL_CYCLE	35	0.373	1.166	0.250	0.508	1	1433
REACTOME_FGFR3_LIGAND_BINDING_AND_ACTIVATION	4	0.658	1.163	0.309	0.513	1	1208
REACTOME_SMOOTH_MUSCLE_CONTRACTION	25	0.403	1.163	0.238	0.513	1	3067
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_RUNX3	92	0.308	1.163	0.178	0.512	1	2466
REACTOME_NEGATIVE_REGULATION_OF_NMDA_RECEPTOR_MEDIATED_NEURONAL_TRANSMISSION	12	0.476	1.161	0.276	0.514	1	2027
REACTOME_PLASMA_LIPOPROTEIN_CLEARANCE	27	0.397	1.161	0.246	0.515	1	1372
REACTOME_TRANSPORT_OF_VITAMINS_NUCLEOSIDES_AND_RELATED_MOLECULES	28	0.394	1.159	0.254	0.517	1	1636
REACTOME_FRS_MEDIATED_FGFR1_SIGNALING	11	0.497	1.157	0.290	0.520	1	4442
REACTOME_SIGNALING_BY_FGFR2_IN_DISEASE	28	0.396	1.157	0.251	0.519	1	2804
REACTOME_DOWNSTREAM_SIGNAL_TRANSDUCTION	28	0.390	1.157	0.258	0.519	1	2804
REACTOME_CS_DS_DEGRADATION	9	0.517	1.157	0.297	0.518	1	1541
REACTOME_BMAL1_CLOCK_NPAS2_ACTIVATES_CIRCADIAN_GENE_EXPRESSION	26	0.398	1.156	0.255	0.518	1	1695
REACTOME_RUNX1_REGULATES_EXPRESSION_OF_COMPONENTS_OF_TIGHT_JUNCTIONS	4	0.649	1.156	0.323	0.518	1	4464
REACTOME_NUCLEOTIDE_BINDING_DOMAIN_LEUCINE_RICH_REPEAT_CONTAINING_RECEPTOR_NLR_SIGNALING_PATHWAYS	47	0.349	1.156	0.234	0.517	1	2742
REACTOME_METABOLISM_OF_NITRIC_OXIDE_NOS3_ACTIVATION_AND_REGULATION	13	0.472	1.155	0.293	0.519	1	1167
REACTOME_CYP2E1_REACTIONS	3	0.706	1.151	0.321	0.526	1	243
REACTOME_SEMA4D_MEDIATED_INHIBITION_OF_CELL_ATTACHMENT_AND_MIGRATION	8	0.525	1.151	0.293	0.525	1	2958
REACTOME_NRIF_SIGNALS_CELL_DEATH_FROM_THE_NUCLEUS	15	0.453	1.151	0.286	0.525	1	4
REACTOME_INTRA_GOLGI_AND_RETROGRADE_GOLGI_TO_ER_TRAFFIC	183	0.278	1.148	0.173	0.530	1	2170

REACTOME_PI_3K_CASCADE_FG FR1	8	0.528	1.147	0.305	0.532	1	1997
REACTOME_ERYTHROPOIETIN_A CTIVATES_PHOSPHOINOSITIDE_ 3_KINASE_PI3K_	8	0.531	1.146	0.301	0.532	1	1470
REACTOME_RAP1_SIGNALLING	13	0.459	1.145	0.306	0.533	1	3484
REACTOME_INTRINSIC_PATHWA Y_FOR_APOPTOSIS	51	0.338	1.143	0.246	0.536	1	3264
REACTOME_SIGNALING_BY_BRA F_AND_RAF_FUSIONS	57	0.329	1.143	0.231	0.536	1	3589
REACTOME_ACTIVATION_OF_IR F3_IRF7_MEDIATED_BY_TBK1_I KK_EPSILON	15	0.447	1.143	0.303	0.535	1	2159
REACTOME_AUTOPHAGY	134	0.286	1.140	0.195	0.539	1	3259
REACTOME_REGULATION_OF_F OXO_TRANSCRIPTIONAL_ACTIVI TY_BY_ACETYLATION	10	0.499	1.139	0.321	0.541	1	1204
REACTOME_PREVENTION_OF_P HAGOSOMAL_LYSOSOMAL_FUSI ON	9	0.508	1.136	0.330	0.548	1	2538
REACTOME_SHC1_EVENTS_IN_E RBB4_SIGNALING	9	0.522	1.136	0.312	0.547	1	770
REACTOME_CELLULAR_RESPON SES_TO_EXTERNAL_STIMULI	499	0.252	1.132	0.133	0.553	1	3038
REACTOME_MAPK1_ERK2_ACTI VATION	8	0.517	1.131	0.310	0.556	1	3513
REACTOME_RHO_GTPASES_ACTI VATE_FORMINS	129	0.285	1.129	0.206	0.559	1	2870
REACTOME_SIGNALLING_TO_P3 8_VIA_RIT_AND_RIN	2	0.739	1.129	0.338	0.558	1	486
REACTOME_RUNX1_INTERACTS _WITH_CO_FACTORS_WHOSE_P RECISE_EFFECT_ON_RUNX1_TAR GETS_IS_NOT_KNOWN	35	0.361	1.129	0.269	0.558	1	4020
REACTOME_PI3K_AKT_ACTIVATI ON	7	0.544	1.128	0.340	0.557	1	255
REACTOME_NEGATIVE_FEEDBA CK_REGULATION_OF_MAPK_PA THWAY	6	0.558	1.126	0.354	0.561	1	3513
REACTOME_ALPHA_PROTEIN_KI NASE_1_SIGNALING_PATHWAY	11	0.474	1.125	0.336	0.563	1	3849
REACTOME_ROLE_OF_LAT2_NT AL_LAB_ON_CALCIIUM_MOBILIZ ATION	13	0.465	1.125	0.337	0.563	1	1652
REACTOME_NEGATIVE_REGULA TION_OF_ACTIVITY_OF_TFAP2_ AP_2_FAMILY_TRANSCRIPTION_ FACTORS	7	0.528	1.124	0.353	0.562	1	78
REACTOME_INSULIN_PROCESSI NG	22	0.392	1.123	0.305	0.564	1	3527

REACTOME_SENESCENCE_ASSOCIATED_SECRETORY_PHENOTYPE_SASP_	57	0.330	1.120	0.277	0.570	1	3842
REACTOME_GLYCOGEN_BREAKDOWN_GLYCOGENOLYSIS_	15	0.438	1.116	0.319	0.578	1	377
REACTOME_G_ALPHA_Q_SIGNALING_EVENTS	87	0.303	1.116	0.264	0.578	1	1263
REACTOME_ANTI_INFLAMMATORY_RESPONSE_FAVOURING_LEISHMANIA_PARASITE_INFECTION	58	0.320	1.114	0.277	0.580	1	3192
REACTOME_ROLE_OF_ABL_IN_ROBO_SLIT_SIGNALING	7	0.527	1.113	0.368	0.583	1	2324
REACTOME_TYROSINE_CATABOLISM	3	0.695	1.112	0.376	0.583	1	3543
REACTOME_TOXICITY_OF_BOTULINUM_TOXIN_TYPE_D_BONT_D	3	0.672	1.109	0.377	0.589	1	4173
REACTOME_RHO_GTPASES_ACTIVATE_KTN1	11	0.468	1.106	0.336	0.594	1	3357
REACTOME_THE_NLRP3_INFLAMMASOME	10	0.477	1.105	0.339	0.596	1	2185
REACTOME_SIGNALING_BY_NTRK2_TRKB_	21	0.394	1.104	0.337	0.596	1	770
REACTOME_SLC_TRANSPORTER_DISORDERS	54	0.320	1.104	0.291	0.597	1	2107
REACTOME_HCMV_INFECTION	96	0.289	1.102	0.286	0.599	1	2152
REACTOME_THE_PHOTOTRANSDUCTION_CASCADE	15	0.426	1.101	0.327	0.601	1	1257
REACTOME_GENE_AND_PROTEIN_EXPRESSION_BY_JAK_STAT_SIGNALING_AFTER_INTERLEUKIN_12_STIMULATION	31	0.358	1.100	0.327	0.601	1	4510
REACTOME_ATF4_ACTIVATES_GENES_IN_RESPONSE_TO_ENDOPLASMIC_RETICULUM_STRESS	26	0.378	1.099	0.330	0.602	1	792
REACTOME_MAP3K8_TPL2_DEPENDENT_MAPK1_3_ACTIVATION	16	0.422	1.099	0.333	0.601	1	4551
REACTOME_REGULATION_OF_RUNX1_EXPRESSION_AND_ACTIVITY	16	0.425	1.098	0.330	0.602	1	2397
REACTOME_CRMP5_IN_SEMA3A_SIGNALING	12	0.451	1.093	0.368	0.615	1	1228
REACTOME_REDUCTION_OF_CYTOSOLIC_CA_LEVELS	7	0.517	1.091	0.370	0.617	1	604
REACTOME_FC_EPSILON_RECEPTOR_FCERI_SIGNALING	117	0.280	1.091	0.320	0.617	1	3067
REACTOME_CELL_DEATH_SIGNALING_VIA_NRAGE_NRIF_AND_NADE	69	0.305	1.090	0.302	0.617	1	615
REACTOME_ERBB2_ACTIVATES_PTK6_SIGNALING	6	0.550	1.090	0.385	0.616	1	695
REACTOME_MATURATION_OF_SPIKE_PROTEIN	5	0.581	1.089	0.388	0.617	1	4107

REACTOME_PI3K_EVENTS_IN_ERBB2_SIGNALING	8	0.495	1.086	0.360	0.625	1	695
REACTOME_KERATAN_SULFATE_KERATIN_METABOLISM	23	0.377	1.086	0.351	0.624	1	2876
REACTOME_REGULATION_OF_FZD_BY_UBIQUITINATION	15	0.427	1.085	0.368	0.623	1	2159
REACTOME_REGULATION_OF_P107_P130_GENE_TRANSCRIPTION	60	0.313	1.084	0.320	0.625	1	2605
REACTOME_INTERACTIONS_OF_VPR_WITH_HOST_CELLULAR_PROTEINS	37	0.340	1.083	0.324	0.627	1	4177
REACTOME_ERBB2_REGULATES_CELL_MOTILITY	8	0.511	1.082	0.392	0.627	1	695
REACTOME_SIGNALING_BY_NOTCH2	28	0.365	1.081	0.360	0.628	1	472
REACTOME_SEMA3A_PLEXIN_REPULSION_SIGNALING_BY_INHIBITING_INTEGRIN_ADHESION	12	0.444	1.081	0.364	0.628	1	2958
REACTOME_REACTIONS_SPECIFIC_TO_THE_COMPLEX_N_GLYCAN_SYNTHESIS_PATHWAY	5	0.567	1.079	0.418	0.632	1	2489
REACTOME_VXPX_CARGO_TARGETING_TO_CILIUM	17	0.407	1.078	0.374	0.633	1	3269
REACTOME_NETRIN_1_SIGNALING	36	0.343	1.078	0.336	0.632	1	3067
REACTOME_GLYCOLYSIS	62	0.308	1.076	0.314	0.635	1	2240
REACTOME_GLYCOGEN_METABOLISM	24	0.379	1.076	0.375	0.634	1	1171
REACTOME_TCR_SIGNALING	94	0.283	1.075	0.320	0.634	1	3067
REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_ACETYLATION	30	0.354	1.075	0.336	0.633	1	5067
REACTOME_SIGNALING_BY_WNT	221	0.255	1.075	0.282	0.634	1	1710
REACTOME_2_LTR_CIRCLE_FORMATION	7	0.515	1.073	0.399	0.635	1	3854
REACTOME_DOWNSTREAM_SIGNALING_OF_ACTIVATED_FGFR1	15	0.414	1.073	0.362	0.634	1	2804
REACTOME_PTK6_EXPRESSION	5	0.576	1.072	0.417	0.636	1	1852
REACTOME_HORMONE_LIGAND_BINDING_RECEPTORS	1	0.809	1.070	0.398	0.640	1	2429
REACTOME_INTRAFLAGELLAR_TRANSPORT	48	0.318	1.069	0.367	0.641	1	910
REACTOME_RNF_MUTANTS_SHOW_ENHANCED_WNT_SIGNALING_AND_PROLIFERATION	6	0.532	1.068	0.407	0.642	1	990
REACTOME_MET_ACTIVATES_PTEN	3	0.651	1.068	0.437	0.642	1	4442
REACTOME_PLATELET_CALCIIUM_HOMEOSTASIS	17	0.393	1.067	0.365	0.642	1	2373
REACTOME_INTERLEUKIN_12_SIGNALING	36	0.338	1.067	0.355	0.641	1	4017

REACTOME_INTERLEUKIN_37_SIGNALING	14	0.420	1.067	0.388	0.641	1	3283
REACTOME_MISCELLANEOUS_TRANSPORT_AND_BINDING_EVENTS	21	0.374	1.067	0.367	0.641	1	2664
REACTOME_SIGNALING_BY_HIPPO	19	0.395	1.064	0.369	0.646	1	2944
REACTOME_ARYL_HYDROCARBON_RECEPTOR_SIGNALING	6	0.526	1.064	0.387	0.645	1	2050
REACTOME_SIGNALING_BY_ERBB2_IN_CANCER	18	0.404	1.060	0.384	0.653	1	1170
REACTOME_SYNTHESIS_OF_IP2_IP_AND_INS_IN_THE_CYTOSOL	11	0.456	1.060	0.373	0.652	1	2901
REACTOME_MUCOPOLYSACCHARIDOSES	11	0.442	1.059	0.378	0.652	1	1498
REACTOME_PI_METABOLISM	69	0.297	1.059	0.378	0.652	1	2725
REACTOME_ACYL_CHAIN_REMODELING_OF_PG	6	0.527	1.056	0.424	0.658	1	2191
REACTOME_RHO_GTPASES_ACTIVATE_RHOTEKIN_AND_RHOPHILINS	8	0.473	1.054	0.403	0.660	1	4089
REACTOME_PHASE_2_PLATEAU_PHASE	9	0.470	1.054	0.427	0.661	1	2906
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_RUNX2	101	0.278	1.053	0.336	0.660	1	3249
REACTOME_NEPHRIN_FAMILY_INTERACTIONS	16	0.401	1.051	0.403	0.665	1	3589
REACTOME_AMINO_ACIDS_REGULATE_MTORC1	50	0.311	1.051	0.367	0.665	1	3038
REACTOME_AMINO_ACID_TRANSPORT_ACROSS_THE_PLASMA_MEMBRANE	21	0.375	1.050	0.400	0.665	1	3233
REACTOME_RAB_REGULATION_OF_TRAFFICKING	111	0.270	1.048	0.353	0.667	1	3679
REACTOME_INTERFERON_SIGNALING	142	0.265	1.048	0.347	0.668	1	3688
REACTOME_LTC4_CYSLTR_MEDIATED_IL4_PRODUCTION	2	0.699	1.047	0.461	0.668	1	3827
REACTOME_ABORTIVE_ELONGATION_OF_HIV_1_TRANSCRIPT_IN_THE_ABSENCE_OF_TAT	23	0.370	1.046	0.398	0.671	1	3778
REACTOME_PRE_NOTCH_EXPRESSION_AND_PROCESSING	57	0.306	1.044	0.400	0.674	1	2126
REACTOME_PERK_REGULATES_GENE_EXPRESSION	31	0.340	1.042	0.394	0.676	1	792
REACTOME_SRP_DEPENDENT_COTRANSLATIONAL_PROTEIN_TARGETING_TO_MEMBRANE	108	0.267	1.040	0.379	0.681	1	5937
REACTOME_FGFR2B_LIGAND_BINDING_AND_ACTIVATION	3	0.635	1.039	0.495	0.682	1	3003
REACTOME_IRAK2_MEDIATED_ACTIVATION_OF_TAK1_COMPLEX	10	0.455	1.038	0.409	0.684	1	4190

REACTOME_INTERLEUKIN_15_SIGNALING	10	0.446	1.036	0.406	0.686	1	3687
REACTOME_PEPTIDE_HORMONE_BIOSYNTHESIS	3	0.644	1.035	0.481	0.688	1	2127
REACTOME_ATTACHMENT_OF_GPI_ANCHOR_TO_UPAR	7	0.499	1.035	0.438	0.687	1	3455
REACTOME_PROTON_COUPLED_MONOCARBOXYLATE_TRANSPORT	3	0.624	1.034	0.470	0.689	1	4784
REACTOME_FCGR_ACTIVATION	5	0.553	1.033	0.470	0.689	1	484
REACTOME_ACTIVATION_OF_KAINATE_RECEPTORS_UPON_GLUTAMATE_BINDING	15	0.406	1.032	0.407	0.690	1	2618
REACTOME_TGF_BETA_RECEPTOR_SIGNALING_IN_EMT_EPITHELIAL_TO_MESENCHYMAL_TRANSITION	16	0.402	1.031	0.432	0.691	1	4089
REACTOME_FGFR1_MUTANT_RECEPTOR_ACTIVATION	22	0.371	1.031	0.425	0.690	1	5475
REACTOME_TRP_CHANNELS	13	0.419	1.029	0.435	0.693	1	1969
REACTOME_ADORA2B_MEDIATED_ANTI_INFLAMMATORY_CYTOKINES_PRODUCTION	37	0.320	1.025	0.430	0.703	1	3050
REACTOME_ZINC_EFFLUX_AND_COMPARTMENTALIZATION_BY_THE_SLC30_FAMILY	6	0.516	1.024	0.443	0.702	1	3880
REACTOME_SIGNALING_BY_NOTCH1_HD_DOMAIN_MUTANTS_IN_CANCER	14	0.414	1.021	0.427	0.708	1	2159
REACTOME_INOSITOL_PHOSPHATE_METABOLISM	36	0.318	1.021	0.419	0.709	1	3487
REACTOME_ACTIVATION_OF_RAS_IN_B_CELLS	3	0.612	1.019	0.482	0.711	1	4927
REACTOME_PREGNENOLONE_BIOSYNTHESIS	9	0.464	1.019	0.462	0.711	1	530
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_BCR_SIGNALING	4	0.574	1.018	0.479	0.711	1	3249
REACTOME_SIGNALING_BY_NOTCH1_PEST_DOMAIN_MUTANTS_IN_CANCER	56	0.293	1.018	0.424	0.711	1	2159
REACTOME_PHENYLALANINE_METABOLISM	4	0.573	1.017	0.485	0.711	1	2045
REACTOME_PI3K_EVENTS_IN_EBFB4_SIGNALING	5	0.539	1.017	0.492	0.711	1	695
REACTOME_SODIUM_COUPLED_PHOSPHATE_COTRANSPORTERS	2	0.692	1.016	0.489	0.711	1	1525
REACTOME_WAX_AND_PLASMALOGEN_BIOSYNTHESIS	4	0.561	1.016	0.492	0.711	1	753
REACTOME_SODIUM_PROTON_EXCHANGERS	5	0.526	1.010	0.492	0.723	1	4045

REACTOME_SIGNALING_BY_FGF R2_III_A_TM	16	0.386	1.009	0.445	0.725	1	2715
REACTOME_P75_NTR_RECEPTOR_MEDIATED_SIGNALLING	87	0.273	1.008	0.420	0.725	1	3450
REACTOME_OPSINS	1	0.757	1.004	0.525	0.734	1	3093
REACTOME_COMPETING_ENDOGENOUS_RNAS_CERNAS_REGULATE_PTEN_TRANSLATION	8	0.455	1.004	0.459	0.733	1	1061
REACTOME_GLUCAGON_LIKE_PEPTIDE_1_GLP1_REGULATES_INSULIN_SECRETION	22	0.360	1.004	0.446	0.732	1	2618
REACTOME_CYTOSOLIC_SULFONATION_OF_SMALL_MOLECULES	15	0.388	1.004	0.437	0.731	1	926
REACTOME_GRB2_EVENTS_IN_ERBB2_SIGNALING	9	0.450	1.001	0.464	0.737	1	695
REACTOME_INWARDLY_RECTIFYING_K_CHANNELS	13	0.407	0.999	0.464	0.740	1	266
REACTOME_THROMBOXANE_SIGNALLING_THROUGH_TP_RECEPTOR	11	0.421	0.998	0.466	0.742	1	1425
REACTOME_SUMOYLATION_OF_DNA_METHYLATION_PROTEINS	16	0.379	0.997	0.444	0.742	1	3853
REACTOME_PHOSPHORYLATION_OF_EMI1	6	0.499	0.993	0.508	0.751	1	4176
REACTOME_G_BETA_GAMMA_SIGNALING_THROUGH_PI3K_GAMMA	12	0.415	0.989	0.481	0.759	1	3080
REACTOME_PROTEIN_UBIQUITINATION	65	0.281	0.989	0.469	0.757	1	4659
REACTOME_CHK1_CHK2_CDS1_MEDIATED_INACTIVATION_OF_CYCLIN_B_CDK1_COMPLEX	13	0.398	0.989	0.488	0.757	1	3484
REACTOME_ERYTHROPOIETIN_ACTIVATES_PHOSPHOLIPASE_C_GAMMA_PLCG	6	0.486	0.987	0.503	0.760	1	3168
REACTOME_PROCESSING_AND_ACTIVATION_OF_SUMO	10	0.424	0.987	0.470	0.760	1	4753
REACTOME_G_ALPHA_S_SIGNALING_EVENTS	51	0.292	0.986	0.489	0.760	1	2618
REACTOME_CD22_MEDIATED_BCR_REGULATION	2	0.659	0.985	0.551	0.762	1	4340
REACTOME_DOWNREGULATION_OF_ERBB2_SIGNALING	21	0.349	0.982	0.492	0.768	1	2159
REACTOME_ADP_SIGNALLING_THROUGH_P2Y_PURINOCEPTOR_1	11	0.418	0.981	0.482	0.768	1	2618
REACTOME_ACTIVATION_OF_NIMA_KINASES_NEK9_NEK6_NEK7	7	0.466	0.981	0.507	0.768	1	4176
REACTOME_GLUCOCORTICOID_BIOSYNTHESIS	2	0.654	0.980	0.561	0.768	1	4197
REACTOME_TRYPTOPHAN_CATABOLISM	8	0.452	0.979	0.501	0.770	1	3635

REACTOME_REGULATION_OF_P TEN_MRNA_TRANSLATION	9	0.440	0.978	0.505	0.770	1	1061
REACTOME_DISEASES_OF_CARB OHYDRATE_METABOLISM	27	0.328	0.978	0.491	0.770	1	1498
REACTOME_ORGANIC_CATION_ ANION_ZWITTERION_TRANSPOR T	6	0.483	0.977	0.506	0.770	1	121
REACTOME_RUNX1_REGULATES _ESTROGEN_RECEPTOR_MEDIAT ED_TRANSCRIPTION	5	0.511	0.977	0.510	0.769	1	3249
REACTOME_JNK_C_JUN_KINASE S_PHOSPHORYLATION_AND_AC TIVATION_MEDIATED_BY_ACTIV ATED_HUMAN_TAK1	21	0.343	0.977	0.480	0.768	1	3849
REACTOME_OTHER_INTERLEUKI N_SIGNALING	16	0.375	0.975	0.493	0.772	1	3528
REACTOME_TP53_REGULATES_T RANSRIPTION_OF_DEATH_REC EPTORS_AND_LIGANDS	10	0.431	0.975	0.513	0.772	1	2084
REACTOME_SIGNALING_BY_NO TCH	166	0.239	0.973	0.521	0.774	1	2163
REACTOME_SYNTHESIS_OF_IP3_ AND_IP4_IN_THE_CYTOSOL	20	0.347	0.973	0.498	0.774	1	821
REACTOME_PTK6_REGULATES_P ROTEINS_INVOLVED_IN_RNA_P ROCESSING	4	0.540	0.972	0.548	0.774	1	3521
REACTOME_NOTCH4_INTRACEL LULAR_DOMAIN_REGULATES_T RANSRIPTION	17	0.362	0.972	0.478	0.773	1	4374
REACTOME_PHASE_II_CONJUGA TION_OF_COMPOUNDS	51	0.285	0.968	0.498	0.782	1	1419
REACTOME_REGULATION_OF_KI T_SIGNALING	15	0.390	0.967	0.505	0.782	1	1580
REACTOME_INTERFERON_ALPH A_BETA_SIGNALING	47	0.287	0.965	0.499	0.785	1	1150
REACTOME_TRANSCRIPTIONAL_ REGULATION_BY_MECP2	46	0.296	0.965	0.522	0.784	1	1146
REACTOME_ORGANIC_CATION_ TRANSPORT	6	0.483	0.965	0.546	0.784	1	121
REACTOME_SMALL_INTERFERIN G_RNA_SIRNA_BIOGENESIS	9	0.435	0.964	0.506	0.784	1	195
REACTOME_FGFR2_ALTERNATIV E_SPLICING	26	0.325	0.961	0.509	0.791	1	4379
REACTOME_NUCLEOTIDE_SALV AGE	19	0.356	0.959	0.515	0.793	1	3878
REACTOME_SIGNALING_BY_ERB B2	41	0.299	0.957	0.507	0.798	1	1170
REACTOME_DISASSEMBLY_OF_T HE_DESTRUCTION_COMPLEX_A ND_RECRUITMENT_OF_AXIN_T O_THE_MEMBRANE	26	0.326	0.957	0.490	0.797	1	267

REACTOME_METABOLISM_OF_ANGIOTENSINOGEN_TO_ANGIOTENSINS	7	0.462	0.953	0.537	0.803	1	2765
REACTOME_SIGNALING_BY_SCF_KIT	38	0.299	0.953	0.537	0.804	1	3235
REACTOME_INSERTION_OF_TAIL_ANCHORED_PROTEINS_INTO_THE_ENDOPLASMIC_RETICULUM_MEMBRANE	21	0.340	0.951	0.530	0.806	1	2256
REACTOME_HIV_LIFE_CYCLE	144	0.237	0.949	0.578	0.809	1	3870
REACTOME_PROTEIN_REPAIR	6	0.487	0.949	0.564	0.809	1	4278
REACTOME_SUMOYLATION_OF_RNA_BINDING_PROTEINS	47	0.289	0.947	0.545	0.811	1	4177
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_INTERLEUKIN_SIGNALING	3	0.579	0.946	0.577	0.812	1	3249
REACTOME_TRANSCRIPTIONAL_ACTIVATION_OF_MITOCHONDRIAL_BIOGENESIS	51	0.275	0.943	0.587	0.819	1	3542
REACTOME_PROLACTIN_RECEPTOR_SIGNALING	10	0.410	0.942	0.557	0.819	1	4551
REACTOME_SIGNALING_BY_MEMBRANE_TETHERED_FUSIONS_OF_PDGFRA_OR_PDGFRB	3	0.564	0.942	0.591	0.818	1	2586
REACTOME_ABACAVIR_METABOLISM	4	0.525	0.942	0.586	0.817	1	3236
REACTOME_ASPARTATE_AND_ASPARAGINE_METABOLISM	6	0.469	0.941	0.539	0.818	1	364
REACTOME_FOXO_MEDIATED_TRANSCRIPTION_OF_CELL_DEATH_GENES	16	0.359	0.941	0.545	0.818	1	1452
REACTOME_NOTCH3_INTRACELLULAR_DOMAIN_REGULATES_TRANSCRIPTION	19	0.347	0.939	0.526	0.821	1	4374
REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_ASSOCIATION_WITH_CO_FACTORS	12	0.386	0.938	0.540	0.821	1	2084
REACTOME_SIGNALING_BY_FGF_R1_IN_DISEASE	28	0.313	0.938	0.550	0.821	1	5475
REACTOME_PROSTACYCLIN_SIGNALING_THROUGH_PROSTACYCLIN_RECEPTOR	8	0.433	0.937	0.562	0.822	1	2618
REACTOME_AKT_PHOSPHORYLATES_TARGETS_IN_THE_CYTOSOL	14	0.365	0.937	0.513	0.821	1	4296
REACTOME_EICOSANOIDS	1	0.703	0.936	0.594	0.822	1	3774
REACTOME_CONSTITUTIVE_SIGNALING_BY_OVEREXPRESSED_ERBB2	11	0.403	0.935	0.555	0.823	1	4118
REACTOME_RAB_GEF_EXCHANGE_GTP_FOR_GDP_ON_RABS	82	0.253	0.932	0.595	0.827	1	4266

REACTOME_NOD1_2_SIGNALING_PATHWAY	35	0.295	0.929	0.579	0.833	1	2742
REACTOME_TRANS_GOLGI_NETWORK_VESICLE_BUDDING	68	0.256	0.929	0.590	0.833	1	4144
REACTOME_INTERFERON_GAMMA_SIGNALING	57	0.269	0.928	0.589	0.834	1	3533
REACTOME_NOTCH1_INTRACELLULAR_DOMAIN_REGULATES_TRANSCRIPTION	45	0.282	0.927	0.579	0.835	1	2159
REACTOME_G_BETA_GAMMA_SIGNALING_THROUGH_CDC42	9	0.416	0.923	0.557	0.842	1	3067
REACTOME_TNF_RECEPTOR_SUPERFAMILY_TNFSF_MEMBERS_MEDIATING_NON_CANONICAL_TNF_KB_PATHWAY	8	0.427	0.921	0.586	0.847	1	3185
REACTOME_GABA_B_RECEPTOR_ACTIVATION	19	0.341	0.917	0.586	0.853	1	266
REACTOME_ANTIVIRAL_MECHANISM_BY_IFN_STIMULATED_GENES	74	0.253	0.917	0.624	0.852	1	3870
REACTOME_SIGNALING_BY_NOTCH1	66	0.258	0.915	0.619	0.855	1	1291
REACTOME_N_GLYCAN_TRIMMING_IN_THE_ER_AND_CALNEXIN_CALRETICULIN_CYCLE	35	0.293	0.915	0.577	0.854	1	3899
REACTOME_MET_RECEPTOR_RECYCLING	7	0.442	0.913	0.571	0.858	1	3687
REACTOME_MECP2_REGULATES_TRANSCRIPTION_FACTORS	3	0.554	0.913	0.625	0.857	1	5367
REACTOME_BUDDING_AND_MATURATION_OF_HIV_VIRION	28	0.304	0.910	0.596	0.861	1	4257
REACTOME_IKK_COMPLEX_RECRUITMENT_MEDIATED_BY_RIP1	21	0.322	0.909	0.605	0.862	1	3094
REACTOME_ROLE_OF_SECOND_MESSENGERS_IN_NETRIN_1_SIGNALING	3	0.563	0.909	0.647	0.862	1	1754
REACTOME_FORMATION_OF_RNA_POL_II_ELONGATION_COMPLEX	56	0.266	0.909	0.596	0.861	1	3815
REACTOME_BETA_CATENIN_PHOSPHORYLATION_CASCADE	16	0.346	0.908	0.577	0.861	1	4060
REACTOME_TRANSPORT_OF_THE_SLBP_DEPENDANT_MATURE_MRNA	36	0.283	0.908	0.619	0.861	1	4377
REACTOME_NRCAM_INTERACTIONS	6	0.455	0.907	0.603	0.862	1	2027
REACTOME_ANTIGEN_PRESENTATION_FOLDING_ASSEMBLY_AND_PEPTIDE_LOADING_OF_CLASS_I_MHC	24	0.310	0.906	0.594	0.862	1	1068
REACTOME_BH3_ONLY_PROTEINS_ASSOCIATE_WITH_AND_INA	9	0.401	0.905	0.592	0.864	1	704

ACTIVATE_ANTI_APOPTOTIC_BCL_2_MEMBERS							
REACTOME_CREB1_PHOSPHORYLATION_THROUGH_THE_ACTIVATION_OF_ADENYLATE_CYCLASE	8	0.413	0.903	0.588	0.866	1	779
REACTOME_SIGNAL_AMPLIFICATION	16	0.338	0.902	0.602	0.868	1	3050
REACTOME_HIV_ELONGATION_ARREST_AND_RECOVERY	32	0.297	0.901	0.620	0.868	1	4042
REACTOME_CELLULAR_RESPONSE_TO_HYPOXIA	70	0.252	0.900	0.659	0.870	1	3159
REACTOME_TERMINATION_OF_O_GLYCAN_BIOSYNTHESIS	8	0.420	0.894	0.605	0.882	1	2813
REACTOME_TRANSCRIPTIONAL_REGULATION_OF_GRANULOPOIESIS	35	0.283	0.893	0.625	0.882	1	1978
REACTOME_G0_AND_EARLY_G1	26	0.301	0.893	0.623	0.882	1	2647
REACTOME_PURINE_RIBONUCLEOSIDE_MONOPHOSPHATE_BIOSYNTHESIS	12	0.364	0.892	0.608	0.882	1	676
REACTOME_GLUCOSE_METABOLISM	77	0.250	0.890	0.668	0.886	1	3995
REACTOME_RUNX3_REGULATES_WNT_SIGNALING	8	0.406	0.889	0.607	0.886	1	2079
REACTOME_KILLING_MECHANISMS	9	0.396	0.888	0.627	0.888	1	2419
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_TP53	343	0.203	0.887	0.803	0.889	1	3232
REACTOME_RUNX3_REGULATES_NOTCH_SIGNALING	14	0.349	0.884	0.633	0.895	1	4374
REACTOME_TRANSPORT_OF_INORGANIC_CATIONS_ANIONS_AND_AMINO_ACIDS_OLIGOPEPTIDES	53	0.258	0.883	0.667	0.895	1	3233
REACTOME_ACTIVATION_OF_PUMA_AND_TRANSLOCATION_TO_MITOCHONDRIA	8	0.405	0.882	0.621	0.895	1	211
REACTOME_AMINE_LIGAND_BINDING_RECEPTORS	6	0.440	0.880	0.647	0.899	1	172
REACTOME_G1_S_DNA_DAMAGE_CHECKPOINTS	65	0.250	0.879	0.723	0.900	1	462
REACTOME_GLUCAGON_TYPE_LIGAND_RECEPTORS	11	0.362	0.877	0.613	0.902	1	2618
REACTOME_GP1B_IX_V_ACTIVATION_SIGNALLING	7	0.422	0.877	0.621	0.902	1	5244
REACTOME_SYNTHESIS_OF_VERY_LONG_CHAIN_FATTY_ACYLCOAS	15	0.342	0.876	0.614	0.901	1	2450
REACTOME_POU5F1_OCT4_SOX2_NANOG_REPRESS_GENES_RELATED_TO_DIFFERENTIATION	7	0.414	0.874	0.637	0.906	1	10
REACTOME_TRANSPORT_OF_NUCLEOSIDES_AND_FREE_PURINE	9	0.385	0.872	0.630	0.908	1	2562

_AND_PYRIMIDINE_BASES_ACR OSS_THE_PLASMA_MEMBRANE REACTOME_MET_ACTIVATES_PI 3K_AKT_SIGNALING	4	0.476	0.871	0.634	0.908	1	1146
REACTOME_RESPONSE_OF_EIF2 AK1_HRI_TO_HEME_DEFICIENCY	15	0.338	0.871	0.635	0.907	1	2459
REACTOME_REGULATION_OF_IF NA_SIGNALING	12	0.369	0.871	0.655	0.907	1	16
REACTOME_SPHINGOLIPID_MET ABOLISM	71	0.240	0.871	0.708	0.906	1	2720
REACTOME_RNA_POLYMERASE_ III_TRANSCRIPTION_INITIATION_ FROM_TYPE_1_PROMOTER	28	0.292	0.869	0.674	0.909	1	1742
REACTOME_CASPASE_ACTIVATI ON_VIA_EXTRINSIC_APOPTOTIC _SIGNALLING_PATHWAY	21	0.308	0.868	0.668	0.909	1	2464
REACTOME_DECTIN_2_FAMILY	7	0.425	0.868	0.652	0.909	1	341
REACTOME_PEXOPHAGY	11	0.371	0.867	0.621	0.909	1	2159
REACTOME_SYNTHESIS_OF_PC	23	0.307	0.867	0.631	0.908	1	766
REACTOME_HIV_INFECTION	218	0.205	0.867	0.823	0.908	1	3870
REACTOME_HOST_INTERACTION S_OF_HIV_FACTORS	123	0.221	0.864	0.756	0.913	1	3019
REACTOME_COMPLEMENT_CAS CADE	15	0.338	0.863	0.667	0.912	1	2708
REACTOME_NS1_MEDIATED_EF FECTS_ON_HOST_PATHWAYS	40	0.268	0.863	0.699	0.912	1	2107
REACTOME_ASSOCIATION_OF_T RIC_CCT_WITH_TARGET_PROTEI NS_DURING_BIOSYNTHESIS	35	0.272	0.863	0.676	0.911	1	3770
REACTOME_SYNTHESIS_OF_PA	27	0.288	0.863	0.692	0.910	1	2469
REACTOME_RAS_PROCESSING	23	0.300	0.861	0.649	0.912	1	4927
REACTOME_PHASE_1_INACTIVA TION_OF_FAST_NA_CHANNELS	3	0.525	0.859	0.695	0.915	1	594
REACTOME_GLYCOGEN_STORA GE_DISEASES	12	0.366	0.857	0.668	0.918	1	3842
REACTOME_FERTILIZATION	6	0.431	0.856	0.655	0.918	1	1562
REACTOME_NOTCH_HLH_TRAN SCRIPTION_PATHWAY	27	0.291	0.856	0.674	0.918	1	4473
REACTOME_PYRUVATE_METAB OLISM	26	0.293	0.856	0.677	0.917	1	2750
REACTOME_BIOSYNTHESIS_OF_ EPA_DERIVED_SPMS	2	0.579	0.856	0.707	0.916	1	4627
REACTOME_ANTIGEN_ACTIVATE S_B_CELL_RECEPTOR_BCR_LEAD ING_TO_GENERATION_OF_SECO ND_MESSENGERS	22	0.303	0.854	0.675	0.918	1	3235
REACTOME_KERATAN_SULFATE _BIOSYNTHESIS	17	0.320	0.852	0.658	0.920	1	2876
REACTOME_LYSINE_CATABOLIS M	10	0.378	0.852	0.659	0.920	1	2973
REACTOME_SIGNALING_BY_NO TCH3	40	0.266	0.852	0.710	0.919	1	2163

REACTOME_SYNTHESIS_OF_PYR OPHOSPHATES_IN_THE_CYTOSO L	7	0.418	0.850	0.654	0.921	1	3487
REACTOME_SIGNALING_BY_FGF R3_FUSIONS_IN_CANCER	9	0.379	0.850	0.670	0.921	1	4118
REACTOME_NEDDYLATI ON	208	0.201	0.848	0.874	0.923	1	3506
REACTOME_PHOSPHOLIPID_ME TABOLISM	165	0.206	0.847	0.815	0.924	1	2725
REACTOME_TCF_DEPENDENT_SI GNALING_IN_RESPONSE_TO_W NT	150	0.211	0.845	0.797	0.927	1	2240
REACTOME_REGULATION_OF_LI PID_METABOLISM_BY_PP ARALPHA	105	0.221	0.844	0.807	0.927	1	1671
REACTOME_SERINE_BIOSYNTH ESIS	9	0.380	0.843	0.660	0.927	1	3160
REACTOME_SPERM_MOTILITY_ AND_TAXES	2	0.570	0.843	0.751	0.927	1	823
REACTOME_EUKARYOTIC_TRAN SLATION_ELONGATION	89	0.228	0.842	0.749	0.928	1	5937
REACTOME_MTORC1_MEDIATE D_SIGNALLING	23	0.297	0.842	0.698	0.927	1	2812
REACTOME_SUMO_IS_TRANSFE RRED_FROM_E1_TO_E2_UB E2I_UBC9	7	0.401	0.842	0.677	0.926	1	4423
REACTOME_ACTIVATED_NTRK2_ SIGNALS_THROUGH_RAS	7	0.409	0.841	0.696	0.926	1	4118
REACTOME_HIV_TRANSCRIPTIO N_ELONGATION	41	0.260	0.839	0.742	0.929	1	4042
REACTOME_FATTY_ACIDS	2	0.574	0.838	0.736	0.930	1	1352
REACTOME_AMYLOID_FIBER_FO RMATION	42	0.261	0.836	0.728	0.932	1	2333
REACTOME_DIGESTION_OF_DIE TARY_LIPID	1	0.628	0.836	0.738	0.931	1	4730
REACTOME_MITOPHAGY	28	0.282	0.834	0.696	0.933	1	4201
REACTOME_IRAK4_DEFICIENCY_ TLR2_4	5	0.436	0.834	0.672	0.933	1	3437
REACTOME_HDMS_DEMETHYLA TE_HISTONES	21	0.303	0.833	0.718	0.933	1	3856
REACTOME_DEFECTIVE_GALNT3 _CAUSES_FAMILIAL_HYPERPHOS PHATEMIC_TUMORAL_CALCINO SIS_HFTC	4	0.471	0.828	0.715	0.941	1	341
REACTOME_DEATH_RECEPTOR_ SIGNALLING	126	0.211	0.823	0.862	0.949	1	3849
REACTOME_SHC_RELATED_EVE NTS_TRIGGERED_BY_IGF1R	7	0.395	0.820	0.716	0.953	1	4118
REACTOME_MASTL_FACILITATES _MITOTIC_PROGRESSION	10	0.357	0.820	0.680	0.952	1	2479
REACTOME_ERYTHROCYTES_TA KE_UP_CARBON_DIOXIDE_AND_ RELEASE_OXYGEN	6	0.404	0.817	0.700	0.956	1	358

REACTOME_TRANSLATION_OF_REPLICASE_AND_ASSEMBLY_OF_THE_REPLICATION_TRANSCRIPTION_COMPLEX	13	0.335	0.817	0.696	0.956	1	2949
REACTOME_BETA_OXIDATION_OF_PRISTANOYL_COA	8	0.377	0.817	0.720	0.955	1	2748
REACTOME_NOTCH3_ACTIVATION_AND_TRANSMISSION_OF_SIGNAL_TO_THE_NUCLEUS	21	0.288	0.816	0.725	0.955	1	1273
REACTOME_APOPTOTIC_CLEAVAGE_OF_CELL_ADHESION_PROTEINS	8	0.375	0.815	0.697	0.955	1	3441
REACTOME_SIGNALING_BY_CYTOSOLIC_FGFR1_FUSION_MUTANTS	18	0.298	0.813	0.704	0.958	1	5475
REACTOME_DOPAMINE_NEUROTRANSMITTER_RELEASE_CYCLE	14	0.323	0.813	0.741	0.957	1	2674
REACTOME_ACTIVATION_OF_NOXA_AND_TRANSLOCATION_TO_MITOCHONDRIA	5	0.414	0.811	0.685	0.959	1	2084
REACTOME_CA2_PATHWAY	45	0.243	0.810	0.785	0.960	1	2079
REACTOME_SUMOYLATION_OF_UBIQUITINYLATION_PROTEINS	39	0.255	0.810	0.773	0.959	1	4377
REACTOME_REGULATION_OF_PYRUVATE_DEHYDROGENASE_PDH_COMPLEX	15	0.312	0.809	0.718	0.958	1	2713
REACTOME_MODULATION_BY_MTB_OF_HOST_IMMUNE_SYSTEM	6	0.412	0.809	0.701	0.958	1	3842
REACTOME_SCAVENGING_BY_CLASS_F_RECEPTORS	4	0.449	0.806	0.715	0.962	1	1484
REACTOME_NUCLEAR_PORE_COMPLEX_NPC_DISASSEMBLY	36	0.256	0.805	0.775	0.961	1	2107
REACTOME_CD209_DC_SIGNALING	18	0.302	0.805	0.738	0.961	1	4927
REACTOME_SUMOYLATION_OF_CHROMATIN_ORGANIZATION_PROTEINS	57	0.232	0.803	0.804	0.964	1	3995
REACTOME_GOLGI_ASSOCIATED_VESICLE_BIOGENESIS	54	0.233	0.801	0.805	0.965	1	4952
REACTOME_INTERACTION_BETWEEN_L1_AND_ANKYRINS	16	0.308	0.801	0.744	0.965	1	2709
REACTOME_GLUONEOGENESIS	25	0.278	0.799	0.775	0.967	1	3792
REACTOME_NEF_MEDIATED_DOWNREGULATION_OF_MHC_CLASS_I_COMPLEX_CELL_SURFACE_EXPRESSION	9	0.368	0.797	0.737	0.969	1	4650
REACTOME_SUMOYLATION_OF_DNA_REPLICATION_PROTEINS	46	0.241	0.795	0.812	0.970	1	4377
REACTOME_FCGR3A_MEDIATED_IL10_SYNTHESIS	24	0.275	0.794	0.748	0.971	1	779

REACTOME_TNFR1_MEDIATED_CERAMIDE_PRODUCTION	4	0.440	0.792	0.732	0.973	1	4494
REACTOME_RESOLUTION_OF_SISTER_CHROMATID_COHESION	116	0.204	0.792	0.900	0.972	1	2549
REACTOME_ACTIVATION_OF_THE_MRNA_UPON_BINDING_OF_THE_CAP_BINDING_COMPLEX_AND_EIF5_AND_SUBSEQUENT_BINDING_TO_43S	56	0.228	0.791	0.817	0.973	1	9316
REACTOME_G_ALPHA_Z_SIGNALING_EVENTS	24	0.273	0.789	0.776	0.974	1	3369
REACTOME_VLDL_CLEARANCE	3	0.474	0.785	0.747	0.980	1	685
REACTOME_MICRORNA_MIRNA_BIOGENESIS	24	0.272	0.781	0.787	0.984	1	2830
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_ADDITIONAL_CELL_CYCLE_GENES_WHOSE_EXACT_ROLE_IN_THE_P53_PATHWAY_REMAIN_UNCERTAIN	21	0.281	0.779	0.793	0.986	1	2287
REACTOME_CONSTITUTIVE_SIGNALING_BY_LIGAND_RESPONSIVE_EGFR_CANCER_VARIANTS	16	0.297	0.779	0.785	0.985	1	4118
REACTOME_SIGNALING_BY_PDGFR_IN_DISEASE	17	0.290	0.779	0.786	0.985	1	4118
REACTOME_VIRAL_MESSENGER_RNA_SYNTHESIS	44	0.238	0.778	0.848	0.985	1	2107
REACTOME_TAK1_ACTIVATES_NFKB_BY_PHOSPHORYLATION_AND_ACTIVATION_OF_IKKS_COMPLEX	29	0.259	0.778	0.783	0.984	1	4296
REACTOME_METHYLATION	10	0.337	0.777	0.763	0.984	1	1419
REACTOME_CHAPERONE_MEDIATED_AUTOPHAGY	17	0.290	0.777	0.799	0.983	1	4166
REACTOME_MAPK6_MAPK4_SIGNALING	82	0.214	0.774	0.876	0.986	1	3130
REACTOME_SIGNALING_BY_PDGFR_TRANSMEMBRANE_JUXTAMEMBRANE_AND_KINASE_DOMAIN_MUTANTS	11	0.321	0.773	0.754	0.986	1	4118
REACTOME_HEDGEHOG_OFF_STATE	97	0.206	0.772	0.918	0.986	1	910
REACTOME_ELEVATION_OF_CYTOSOLIC_CA2_LEVELS	10	0.341	0.772	0.762	0.986	1	1383
REACTOME_TRANSPORT_OF_MATURE_TRANSCRIPT_TO_CYTOPLASM	79	0.211	0.768	0.876	0.991	1	4377
REACTOME_IRAK1_RECRUITS_IKK_COMPLEX	14	0.308	0.766	0.762	0.991	1	2742
REACTOME_MRNA_CAPPING	28	0.262	0.766	0.796	0.991	1	3778
REACTOME_GENOME_REPLICATION_AND_TRANSCRIPTION	6	0.385	0.765	0.753	0.991	1	1276

REACTOME_SUMOYLATION_OF_SUMOYLATION_PROTEINS	35	0.245	0.765	0.846	0.990	1	4377
REACTOME_E3_UBIQUITIN_LIGASES_UBIQUITINATE_TARGET_PROTEINS	45	0.229	0.765	0.865	0.989	1	4659
REACTOME_ENDOSOMAL_SORTING_COMPLEX_REQUIRED_FOR_TRANSPORT_ESCRT	31	0.252	0.764	0.838	0.989	1	4257
REACTOME_DISEASES_ASSOCIATED_WITH_N_GLYCOSYLATION_OF_PROTEINS	17	0.282	0.761	0.792	0.993	1	2489
REACTOME_TRANSPORT_OF_MATURE_MRNAS_DERIVED_FROM_INTRONLESS_TRANSCRIPTS	43	0.235	0.760	0.855	0.992	1	4177
REACTOME_FORMATION_OF_THE_EARLY_ELONGATION_COMPLEX	32	0.242	0.756	0.855	0.997	1	3778
REACTOME_SYNTHESIS_OF_PIP3_AT_THE_GOLGI_MEMBRANE	15	0.291	0.755	0.801	0.997	1	3066
REACTOME_INITIAL_TRIGGERING_OF_COMPLEMENT	7	0.363	0.753	0.791	0.999	1	2379
REACTOME_TRANSCRIPTIONAL_REGULATION_OF_WHITE_ADIPOCYTE_DIFFERENTIATION	73	0.210	0.753	0.915	0.998	1	1043
REACTOME_GLUCAGON_SIGNALING_IN_METABOLIC_REGULATION	16	0.285	0.752	0.797	0.998	1	779
REACTOME_RNA_POLYMERASE_I_TRANSCRIPTION_TERMINATION	30	0.248	0.751	0.840	0.998	1	3764
REACTOME_VITAMINS	3	0.447	0.751	0.774	0.997	1	2118
REACTOME_SCAVENGING_BY_CLASS_B_RECEPTORS	1	0.564	0.749	0.896	0.999	1	5537
REACTOME_VASOPRESSIN_REGULATES_RENAL_WATER_HOMEOSTASIS_VIA_AQUAPORINS	21	0.268	0.748	0.828	0.999	1	2618
REACTOME_DEFECTIVE_LFNG_CAUSES_SCDO3	4	0.418	0.746	0.773	0.999	1	7395
REACTOME_DAP12_SIGNALING	21	0.267	0.746	0.845	0.999	1	770
REACTOME_TP53_REGULATES_METABOLIC_GENES	81	0.203	0.743	0.934	1.000	1	3232
REACTOME_PTEN_REGULATION	135	0.187	0.740	0.964	1.000	1	3097
REACTOME_HSF1_DEPENDENT_TRANSACTIVATION	31	0.240	0.738	0.872	1.000	1	4406
REACTOME_REGULATION_OF_TP53_EXPRESSION_AND_DEGRADATION	35	0.235	0.738	0.870	1.000	1	3170
REACTOME_DAP12_INTERACTIONS	24	0.257	0.738	0.824	1.000	1	2804
REACTOME_MECP2_REGULATES_NEURONAL_RECEPTORS_AND_CHANNELS	13	0.299	0.737	0.819	1.000	1	1146

REACTOME_SUMO_IS_CONJUGATED_TO_E1_UBA2_SAE1	5	0.387	0.734	0.781	1.000	1	3483
REACTOME_FOLDING_OF_ACTIN_BY_CCT_TRIC	9	0.330	0.733	0.790	1.000	1	2601
REACTOME_TETRAHYDROBIOPTERIN_BH4_SYNTHESIS_RECYCLING_SALVAGE_AND_REGULATION	9	0.334	0.733	0.813	1.000	1	1587
REACTOME_EXPORT_OF_VIRAL_RIBONUCLEOPROTEINS_FROM_NUCLEUS	33	0.239	0.732	0.882	1.000	1	2107
REACTOME_MATURATION_OF_PROTEIN_3A	6	0.360	0.731	0.810	1.000	1	3799
REACTOME_N_GLYCAN_ANTENNAE_ELONGATION_IN_THE_MEDIAL_TRANS_GOLGI	16	0.287	0.731	0.843	1.000	1	2876
REACTOME_CYTOCHROME_C_MEDIATED_APOPTOTIC_RESPONSE	13	0.296	0.731	0.825	1.000	1	2887
REACTOME_REGULATION_OF_CHOLESTEROL_BIOSYNTHESIS_BY_SREBP_SREBF	55	0.212	0.730	0.904	1.000	1	1248
REACTOME_PURINE_SALVAGE	12	0.303	0.728	0.818	1.000	1	2827
REACTOME_METHIONINE_SALVAGE_PATHWAY	6	0.360	0.725	0.814	1.000	1	3471
REACTOME_METABOLISM_OF_STEROID_HORMONES	17	0.274	0.723	0.852	1.000	1	4197
REACTOME_PEPTIDE_HORMONE_METABOLISM	44	0.219	0.723	0.935	1.000	1	3527
REACTOME_HUR_ELAVL1_BINDS_AND_STABILIZES_MRNA	8	0.335	0.723	0.819	1.000	1	4159
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_CASPASE_ACTIVATORS_AND_CASPASES	8	0.334	0.723	0.813	1.000	1	2575
REACTOME_MITOTIC_PROPHASE	91	0.191	0.722	0.946	1.000	1	4458
REACTOME_NECTIN_NECL_TRANS_HETERODIMERIZATION	4	0.403	0.721	0.805	1.000	1	2269
REACTOME_PHOSPHATE_BOND_HYDROLYSIS_BY_NUDT_PROTEINS	7	0.342	0.719	0.837	1.000	1	537
REACTOME_SYNTHESIS_OF_12_EICOSATETRAENOIC_ACID_DERIVATIVES	5	0.381	0.715	0.789	1.000	1	1084
REACTOME_DCC_MEDIATED_ATTRACTIVE_SIGNALING	12	0.297	0.714	0.845	1.000	1	312
REACTOME_PYRUVATE_METABOLISM_AND_CITRIC_ACID_TCA_CYCLE	49	0.215	0.713	0.902	1.000	1	2973
REACTOME_SIGNALING_BY_HEDGEHOG	123	0.184	0.713	0.979	1.000	1	910
REACTOME_ATTENUATION_PHASE	23	0.251	0.712	0.872	1.000	1	4406

REACTOME_DISEASES_ASSOCIATED_WITH_SURFACTANT_METABOLISM	1	0.539	0.709	0.933	1.000	1	5856
REACTOME_SIGNALING_BY_BMP	16	0.268	0.709	0.847	1.000	1	3722
REACTOME_LRR_FLII_INTERACTING_PROTEIN_1_LRRFIP1_ACTIVATES_TYPE_I_IFN_PRODUCTION	5	0.367	0.709	0.803	1.000	1	4925
REACTOME_CLEC7A_DECTIN_1_INDUCES_NFAT_ACTIVATION	11	0.294	0.704	0.842	1.000	1	1710
REACTOME_ADP_SIGNALLING_THROUGH_P2Y_PURINOCEPTOR_12	10	0.301	0.702	0.825	1.000	1	3050
REACTOME_N_GLYCAN_ANTENNAE_ELONGATION	10	0.302	0.702	0.854	1.000	1	2876
REACTOME_SIGNALING_BY_NOTCH1_T_7_9_NOTCH1_M1580_K2555_TRANSLOCATION_MUTANT	7	0.342	0.701	0.826	1.000	1	472
REACTOME_CELLULAR_RESPONSE_TO_HEAT_STRESS	93	0.187	0.701	0.978	1.000	1	4406
REACTOME_SIGNALING_BY_THE_B_CELL_RECEPTOR_BCR	97	0.185	0.700	0.972	1.000	1	4340
REACTOME_RNA_POLYMERASE_III_TRANSCRIPTION	40	0.220	0.700	0.926	1.000	1	1742
REACTOME_CLASS_I_MHC_MEDIATED_ANTIGEN_PROCESSING_PPRESENTATION	319	0.161	0.699	1.000	1.000	1	4026
REACTOME_CARGO_TRAFFICKING_TO_THE_PERICILIARY_MEMBRANE	43	0.210	0.696	0.943	1.000	1	3269
REACTOME_HATS_ACETYLATE_HISTONES	85	0.187	0.694	0.966	1.000	1	3159
REACTOME_PINK1_PRKN_MEDIATED_MITOPHAGY	21	0.248	0.693	0.899	1.000	1	2159
REACTOME_NEUROTOXICITY_OF_CLOSTRIDIUM_TOXINS	6	0.349	0.691	0.829	1.000	1	2256
REACTOME_MULTIFUNCTIONAL_ANION_EXCHANGERS	4	0.388	0.690	0.844	1.000	1	1633
REACTOME_SCF_SKP2_MEDIATED_DEGRADATION_OF_P27_P21	59	0.195	0.689	0.961	1.000	1	1052
REACTOME_ACTIVATION_OF_C3_AND_C5	5	0.360	0.686	0.822	1.000	1	2379
REACTOME_DNA_DAMAGE_TELOMERE_STRESS_INDUCED_SENESCENCE	38	0.215	0.686	0.931	1.000	1	462
REACTOME_COOPERATION_OF_PDCL_PHLP1_AND_TRIC_CCT_IN_G_PROTEIN_BETA_FOLDING	24	0.241	0.686	0.888	1.000	1	3369
REACTOME_MITOCHONDRIAL_BIOGENESIS	87	0.184	0.685	0.980	1.000	1	3361
REACTOME_TRANSCRIPTION_OF_THE_HIV_GENOME	66	0.195	0.682	0.963	1.000	1	3815

REACTOME_OVARIAN_TUMOR_DOMAIN_PROTEASES	34	0.221	0.682	0.927	1.000	1	3082
REACTOME_NUCLEOTIDE_LIKE_PURINERGIC_RECEPTORS	5	0.350	0.681	0.873	1.000	1	948
REACTOME_INFLUENZA_INFECTION	151	0.168	0.680	0.991	1.000	1	5337
REACTOME_SIGNALING_BY_ROBO_RECEPTORS	191	0.164	0.680	0.999	1.000	1	5544
REACTOME_ORGANIC_ANION_TRANSPORTERS	3	0.416	0.677	0.859	1.000	1	1172
REACTOME_ACTIVATED_NOTCH1_TRANSMITS_SIGNAL_TO_THE_NUCLEUS	26	0.233	0.677	0.903	1.000	1	1273
REACTOME_REGULATION_OF_GLUCOKINASE_BY_GLUCOKINASE_REGULATORY_PROTEIN	30	0.224	0.674	0.933	1.000	1	2107
REACTOME_DISEASES_ASSOCIATED_WITH_GLYCOSYLATION_PRECURSOR_BIOSYNTHESIS	18	0.245	0.667	0.906	1.000	1	2649
REACTOME_CROSS_PRESENTATION_OF_SOLUBLE_EXOGENOUS_ANTIGENS_ENDOSOMES	45	0.202	0.667	0.952	1.000	1	45
REACTOME_CREB3_FACTORS_ACTIVATE_GENES	8	0.310	0.666	0.865	1.000	1	1248
REACTOME_PRC2_METHYLATES_HISTONES_AND_DNA	23	0.234	0.665	0.924	1.000	1	85
REACTOME_RELEASE_OF_APOPTOTIC_FACTORS_FROM_THE_MITOCHONDRIA	5	0.352	0.663	0.844	1.000	1	8232
REACTOME_MTOR_SIGNALLING	39	0.206	0.662	0.947	1.000	1	3484
REACTOME_VITAMIN_D_CALCIFEROL_METABOLISM	8	0.304	0.661	0.880	1.000	1	3128
REACTOME_FATTY_ACYL_COA_BIOSYNTHESIS	26	0.221	0.658	0.928	1.000	1	2450
REACTOME_REGULATION_OF_HSF1_MEDIATED_HEAT_SHOCK_RESPONSE	76	0.181	0.658	0.985	1.000	1	3995
REACTOME_NUCLEAR_ENVELOPE_BREAKDOWN	52	0.195	0.656	0.969	1.000	1	4409
REACTOME_APOPTOTIC_FACTOR_MEDIATED_RESPONSE	18	0.240	0.655	0.927	1.000	1	2887
REACTOME_REGULATION_OF_GENE_EXPRESSION_IN_LATE_STAGE_BRANCHING_MORPHOGENESIS_PANCREATIC_BUD_PRECURSOR_CELLS	12	0.264	0.651	0.919	1.000	1	4374
REACTOME_ATF6_ATF6_ALPHA_ACTIVATES_CHAPERONES	12	0.269	0.651	0.897	1.000	1	4215
REACTOME_TYSND1_CLEAVES_PEROXISOMAL_PROTEINS	7	0.310	0.649	0.871	1.000	1	8768
REACTOME_TRAFFICKING_OF_MYRISTOYLATED_PROTEINS_TO_THE_CILIUM	4	0.367	0.646	0.879	1.000	1	3116

REACTOME_C_TYPE_LECTIN_RE CEPTORS_CLRS_	112	0.167	0.643	0.994	1.000	1	4340
REACTOME_DEX_H_BOX_HELIC ASES_ACTIVATE_TYPE_I_IFN_AN D_INFLAMMATORY_CYTOKINES _PRODUCTION_	7	0.310	0.640	0.878	1.000	1	5070
REACTOME_INITIATION_OF_NU CLEAR_ENVELOPE_NE_REFORM ATION	19	0.234	0.635	0.927	1.000	1	9743
REACTOME_PROCESSING_OF_C APPED_INTRON_CONTAINING_P RE_MRNA	236	0.149	0.634	1.000	1.000	1	4177
REACTOME_PHOSPHORYLATION _OF_THE_APC_C	20	0.226	0.631	0.941	1.000	1	5013
REACTOME_CONSTITUTIVE_SIG NALING_BY_EGFRVIII	12	0.252	0.625	0.910	1.000	1	4118
REACTOME_APC_C_CDC20_MED IATED_DEGRADATION_OF_CYCLI N_B	24	0.218	0.623	0.951	1.000	1	5013
REACTOME_TRANSCRIPTIONAL_ REGULATION_BY_SMALL_RNAS	57	0.180	0.622	0.984	1.000	1	2107
REACTOME_TRANSCRIPTIONAL_ REGULATION_BY_VENTX	36	0.197	0.619	0.976	1.000	1	1433
REACTOME_LDL_CLEARANCE	18	0.230	0.619	0.948	1.000	1	1372
REACTOME_DEFENSINS	3	0.381	0.618	0.911	1.000	1	1251
REACTOME_ALPHA_DEFENSINS	3	0.381	0.617	0.909	1.000	1	1251
REACTOME_EUKARYOTIC_TRAN SLATION_INITIATION	113	0.158	0.615	0.999	1.000	1	5937
REACTOME_ARACHIDONATE_PR ODUCTION_FROM_DAG	4	0.351	0.615	0.887	1.000	1	4067
REACTOME_MRNA_SPLICING	186	0.149	0.612	1.000	1.000	1	4161
REACTOME_AQUAPORIN_MEDI ATED_TRANSPORT	24	0.212	0.612	0.963	1.000	1	2618
REACTOME_NONSENSE_MEDIAT ED_DECAY_NMD_	110	0.161	0.610	0.997	1.000	1	6007
REACTOME_MITOTIC_TELOPHAS E_CYTOKINESIS	13	0.245	0.609	0.927	1.000	1	9605
REACTOME_BETA_OXIDATION_ OF_HEXANOYL_COA_TO_BUTAN OYL_COA	5	0.319	0.608	0.909	1.000	1	8660
REACTOME_NUCLEAR_IMPORT_ OF_REV_PROTEIN	34	0.192	0.608	0.973	1.000	1	2107
REACTOME_ALPHA_LINOLENIC_ OMEGA3_AND_LINOLEIC_OMEG A6_ACID_METABOLISM	11	0.252	0.606	0.925	1.000	1	4978
REACTOME_MYOCLONIC_EPILEP SY_OF_LAFORA	7	0.287	0.604	0.922	1.000	1	3842
REACTOME_DEACTIVATION_OF_ THE_BETA_CATENIN_TRANSACTI VATING_COMPLEX	35	0.192	0.603	0.974	1.000	1	3842

REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_DNA_REPAIR_GENES	60	0.171	0.603	0.995	1.000	1	3815
REACTOME_RNA_POLYMERASE_II_TRANSCRIPTION_TERMINATION	63	0.171	0.599	0.997	1.000	1	4271
REACTOME_LINOLEIC_ACID_LAMETABOLISM	6	0.302	0.598	0.918	1.000	1	4292
REACTOME_PROTEIN_METHYLATION	16	0.228	0.593	0.958	1.000	1	4224
REACTOME_POSTMITOTIC_NUCLEAR_PORE_COMPLEX_NPC_REFORMATION	27	0.200	0.591	0.964	1.000	1	2107
REACTOME_CD28_DEPENDENT_PI3K_AKT_SIGNALING	19	0.212	0.589	0.969	1.000	1	3080
REACTOME_ANTIGEN_PROCESSING_UBIQUITINATION_PROTEASOME_DEGRADATION	272	0.136	0.587	1.000	1.000	1	4026
REACTOME_RNA_POLYMERASE_II_TRANSCRIBES_SNRNA_GENES	74	0.162	0.584	0.995	1.000	1	3815
REACTOME_INTERLEUKIN_1_FAMILY_SIGNALING	108	0.151	0.584	1.000	1.000	1	3449
REACTOME_MRNA_SPLICING_MINOR_PATHWAY	52	0.172	0.581	0.984	1.000	1	2715
REACTOME_DOWNSTREAM_SIGNALING_EVENTS_OF_B_CELL_RECEPTOR_BCR	76	0.161	0.578	0.998	1.000	1	4991
REACTOME_PKA_MEDIATED_PHOSPHORYLATION_OF_CREB	13	0.231	0.573	0.954	1.000	1	779
REACTOME_MITOTIC_METAPHASE_AND_ANAPHASE	224	0.134	0.567	1.000	1.000	1	2240
REACTOME_CLEC7A_DECTIN_1_SIGNALING	94	0.151	0.566	0.998	1.000	1	4335
REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS	21	0.200	0.564	0.977	1.000	1	10167
REACTOME_CONVERSION_FROM_APC_C_CDC20_TO_APC_C_CDH1_IN_LATE_ANAPHASE	20	0.202	0.554	0.986	1.000	1	3783
REACTOME_REGULATION_OF_P_TEN_LOCALIZATION	9	0.244	0.549	0.951	1.000	1	9613
REACTOME_ERYTHROCYTES_TAKE_UP_OXYGEN_AND_RELEASE_CARBOONDIOXIDE	2	0.362	0.549	0.959	1.000	1	2318
REACTOME_MECP2_REGULATES_TRANSCRIPTION_OF_NEURONALL_LIGANDS	5	0.288	0.546	0.960	1.000	1	9046
REACTOME_SEPARATION_OF_SISTER_CHROMATIDS	179	0.133	0.544	1.000	1.000	1	2240

REACTOME_CHROMATIN_MODIFYING_ENZYMES	208	0.129	0.542	1.000	1.000	1	3168
REACTOME_REGULATION_OF_MECP2_EXPRESSION_AND_ACTIVITY	29	0.184	0.541	0.993	1.000	1	1061
REACTOME_B_WICH_COMPLEX_POSITIVELY_REGULATES_RRNA_EXPRESSION	41	0.168	0.539	0.993	1.000	1	3793
REACTOME_NEF_MEDIATED_CD8_DOWN_REGULATION	7	0.258	0.539	0.960	1.000	1	2755
REACTOME_DOWNREGULATION_OF_ERBB4_SIGNALING	8	0.248	0.536	0.956	1.000	1	3842
REACTOME_BETA_OXIDATION_OF_BUTANOYL_COA_TO_ACETYL_COA	3	0.319	0.531	0.948	1.000	1	8660
REACTOME_PKA_ACTIVATION_IN_GLUCAGON_SIGNALLING	10	0.223	0.520	0.979	1.000	1	2328
REACTOME_ARMS_MEDIATED_ACTIVATION	5	0.268	0.519	0.964	1.000	1	3484
REACTOME_HCMV_LATE_EVENTS	60	0.148	0.516	1.000	1.000	1	4377
REACTOME_ACYL_CHAIN_REMODELING_OF_CL	5	0.269	0.511	0.970	1.000	1	1237
REACTOME_INHIBITION_OF_DNA_RECOMBINATION_AT_TELOMERE	30	0.166	0.510	1.000	1.000	1	2835
REACTOME_TIE2_SIGNALING	13	0.209	0.507	0.978	1.000	1	4442
REACTOME_INTERACTIONS_OF_REV_WITH_HOST_CELLULAR_PROTEINS	37	0.159	0.503	0.998	1.000	1	2107
REACTOME_SIGNALING_BY_ERB_B2_ECD_MUTANTS	13	0.201	0.502	0.987	1.000	1	4118
REACTOME_SNRNP_ASSEMBLY	52	0.147	0.500	0.998	1.000	1	4377
REACTOME_DEUBIQUITINATION	226	0.117	0.498	1.000	1.000	1	3181
REACTOME_ANDROGEN_BIOSYNTHESIS	4	0.280	0.494	0.976	1.000	1	3910
REACTOME_NR1H2_NR1H3_REGULATE_GENE_EXPRESSION_TO_CONTROL_BILE_ACID_HOMEOSTASIS	7	0.245	0.493	0.973	1.000	1	5158
REACTOME_CITRIC_ACID_CYCLE_TCA_CYCLE	22	0.176	0.489	0.991	1.000	1	2082
REACTOME_ACTIVATION_OF_ANTERIOR_HOX_GENES_IN_HIND_BRAIN_DEVELOPMENT_DURING_EARLY_EMBRYOGENESIS	66	0.139	0.486	1.000	1.000	1	3821
REACTOME_ATF6_ATF6_ALPHA_ACTIVATES_CHAPERONE_GENES	10	0.213	0.485	0.981	1.000	1	4215
REACTOME_APC_CDC20_MEDIATED_DEGRADATION_OF_NEK2A	26	0.165	0.484	0.995	1.000	1	3892

REACTOME_SYNTHESIS_OF_PIP3_AT_THE_EARLY_ENDOSOME_MEMBRANE	15	0.187	0.482	0.984	1.000	1	2243
REACTOME_RNA_POLYMERASE_I_TRANSCRIPTION	60	0.137	0.479	1.000	1.000	1	3522
REACTOME_ACTIVATION_OF_RAC1_DOWNSTREAM_OF_NMDARS	7	0.232	0.476	0.996	1.000	1	4281
REACTOME_ABERRANT_REGULATION_OF_MITOTIC_EXIT_IN_CANCER_DUE_TO_RB1_DEFECTS	20	0.169	0.469	0.996	1.000	1	3783
REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_METHYLATION	19	0.170	0.461	0.993	1.000	1	3170
REACTOME_KSRP_KHSRP_BINDS_AND_DESTABILIZES_MRNA	17	0.171	0.455	0.997	1.000	1	3199
REACTOME_TRNA_PROCESSING_IN_THE_NUCLEUS	58	0.129	0.448	1.000	1.000	1	4682
REACTOME_NEGATIVE_EPIGENETIC_REGULATION_OF_RRNA_EXPRESSION	58	0.129	0.445	1.000	1.000	1	11074
REACTOME_RETROGRADE_NEUROTROPHIN_SIGNALLING	11	0.191	0.445	0.995	1.000	1	10291
REACTOME_NA_CL_DEPENDENT_NEUROTRANSMITTER_TRANSPORTERS	2	0.296	0.445	0.994	1.000	1	3207
REACTOME_NTRK2_ACTIVATES_RAC1	3	0.275	0.441	0.996	1.000	1	2419
REACTOME_RECYCLING_OF_EIF2_GDP	8	0.201	0.435	0.993	1.000	1	1783
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_G2_CELL_CYCLE_ARREST	18	0.162	0.434	0.996	1.000	1	2407
REACTOME_SENSING_OF_DNA_DOUBLE_STRAND_BREAKS	6	0.215	0.430	0.994	1.000	1	4604
REACTOME_P2Y_RECEPTORS	3	0.256	0.426	1.000	1.000	1	4466
REACTOME_RNA_POLYMERASE_I_PROMOTER_ESCAPE	40	0.129	0.414	1.000	1.000	1	11074
REACTOME_MITOCHONDRIAL_FATTY_ACID_BETA_OXIDATION_OF_SATURATED_FATTY_ACIDS	8	0.187	0.412	0.998	1.000	1	4992
REACTOME_REGULATION_OF_RUNX3_EXPRESSION_AND_ACTIVITY	55	0.115	0.401	1.000	1.000	1	184
REACTOME_RESPONSE_OF_EIF2AK4_GCN2_TO_AMINO_ACID_DEFICIENCY	97	0.092	0.352	1.000	1.000	1	5937
REACTOME_RETROGRADE_TRANSPORT_AT_THE_TRANS_GOLGI_NETWORK	47	0.103	0.348	1.000	1.000	1	1985
REACTOME_FCERI_MEDIATED_NF_KB_ACTIVATION	73	0.097	0.347	1.000	1.000	1	4991

HS_siLonp vs siScramble

NAME	SIZE	ES	NES	NOM p-val	FDR q-val	FWER p-val	RANK AT MAX
REACTOME_NUCLEAR_EVENTS_KINASE_AND_TRANSCRIPTION_FACTOR_ACTIVATION	54	0.649	2.320	0.000	0.000	0.000	2088
REACTOME_NGF_STIMULATED_TRANSCRIPTION	33	0.721	2.298	0.000	0.000	0.000	1589
REACTOME_SRP_DEPENDENT_COTRANSLATIONAL_PROTEIN_TARGETING_TO_MEMBRANE	108	0.552	2.250	0.000	0.000	0.000	4689
REACTOME_EUKARYOTIC_TRANSLATION_ELONGATION	89	0.568	2.201	0.000	0.000	0.000	4689
REACTOME KERATINIZATION	38	0.655	2.195	0.000	0.000	0.000	1499
REACTOME_ELASTIC_FIBRE_FORMATION	25	0.722	2.192	0.000	0.000	0.000	1821
REACTOME_EXTRACELLULAR_MATRIX_ORGANIZATION	164	0.511	2.188	0.000	0.000	0.000	1289
REACTOME_ASSEMBLY_AND_CELL_SURFACE_PRESENTATION_OF_NMDA_RECEPTORS	24	0.696	2.109	0.000	0.002	0.010	2861
REACTOME_FORMATION_OF_THE_CORNIFIED_ENVELOPE	34	0.657	2.108	0.000	0.001	0.010	1741
REACTOME_RESPONSE_OF_EIF2AK4_GCN2_TO_AMINO_ACID_DEFICIENCY	97	0.524	2.094	0.000	0.001	0.010	4689
REACTOME_FORMATION_OF_TUBULIN_FOLDING_INTERMEDIATES_BY_CCTTRIC	19	0.745	2.088	0.000	0.001	0.013	1710
REACTOME_MOLECULES_ASSOCIATED_WITH_ELASTIC_FIBRES	19	0.734	2.072	0.000	0.002	0.015	1821
REACTOME_INTEGRIN_CELL_SURFACE_INTERACTIONS	45	0.578	2.024	0.000	0.004	0.043	1119
REACTOME_A_TETRASACCHARIDE_LINKER_SEQUENCE_IS_REQUIRED_FOR_GAG_SYNTHESIS	15	0.772	2.012	0.000	0.005	0.058	2177
REACTOME_DEGRADATION_OF_THE_EXTRACELLULAR_MATRIX	70	0.541	2.011	0.000	0.005	0.060	1119
REACTOME_RESPONSE_TO_METAL_IONS	10	0.829	2.010	0.000	0.005	0.061	1424
REACTOME_EUKARYOTIC_TRANSLATION_INITIATION	113	0.486	1.986	0.000	0.006	0.087	4732
REACTOME_METALLOTHIONEIN_BIND_METALS	8	0.874	1.983	0.000	0.007	0.092	1066
REACTOME_CHONDROITIN_SULFATE_DERMATAN_SULFATE_METABOLISM	36	0.598	1.977	0.000	0.007	0.103	1682
REACTOME_ASSEMBLY_OF_COLLAGEN_FIBRILS_AND_OTHER_MULTIMERIC_STRUCTURES	32	0.615	1.974	0.000	0.007	0.108	1289

REACTOME_DEFECTIVE_B4GALT 7_CAUSES_EDS_PROGEROID_TY PE	11	0.804	1.971	0.000	0.007	0.110	2177
REACTOME_SYNDECAN_INTERA CTIONS	18	0.710	1.971	0.002	0.007	0.112	2065
REACTOME_SIGNALING_BY_NTR KS	113	0.484	1.966	0.000	0.007	0.122	2088
REACTOME DISSOLUTION_OF_FI BRIN_CLOT	10	0.819	1.962	0.000	0.007	0.134	2250
REACTOME_RESPONSE_TO_ELEV ATED_PLATELET_CYTOSOLIC_CA 2_	85	0.499	1.939	0.000	0.009	0.177	2642
REACTOME_COOPERATION_OF_ PREFOLDIN_AND_TRIC_CCT_IN_ ACTIN_AND_TUBULIN_FOLDING	26	0.633	1.934	0.000	0.010	0.190	1710
REACTOME_CONSTITUTIVE_SIG NALING_BY_ABERRANT_PI3K_IN _CANCER	39	0.579	1.934	0.000	0.009	0.190	1771
REACTOME_CELL_EXTRACELLUL AR_MATRIX_INTERACTIONS	17	0.703	1.924	0.000	0.011	0.223	2504
REACTOME_NONSENSE_MEDIAT ED_DECAY_NMD_	110	0.481	1.920	0.000	0.011	0.236	4689
REACTOME_COLLAGEN_CHAIN_ TRIMERIZATION	15	0.712	1.918	0.000	0.011	0.240	1119
REACTOME_ECM_PROTEOGLYCA NS	37	0.577	1.901	0.000	0.014	0.306	2186
REACTOME_ROS_AND_RNS_PRO DUCTION_IN_PHAGOCYTES	21	0.641	1.898	0.002	0.014	0.312	3485
REACTOME_COLLAGEN_FORMA TION	50	0.528	1.884	0.000	0.017	0.362	1289
REACTOME_COLLAGEN_DEGRAD ATION	29	0.595	1.881	0.000	0.017	0.379	708
REACTOME_SHC1_EVENTS_IN_E GFR_SIGNALING	10	0.793	1.880	0.002	0.017	0.383	922
REACTOME_NEUREXINS_AND_N EUROLIGINS	34	0.582	1.879	0.000	0.016	0.387	2063
REACTOME_CHEMOKINE_RECEP TORS_BIND_CHEMOKINES	10	0.792	1.875	0.000	0.017	0.408	1549
REACTOME_PLASMA_LIPOPROT EIN_ASSEMBLY	9	0.804	1.871	0.002	0.018	0.427	406
REACTOME_RECYCLING_PATHW AY_OF_L1	39	0.560	1.867	0.002	0.018	0.441	1810
REACTOME_NON_INTEGRIN_ME MBRANE_ECM_INTERACTIONS	37	0.559	1.858	0.000	0.020	0.479	2264
REACTOME_ACTIVATION_OF_A MPK_DOWNSTREAM_OF_NMDA RS	20	0.650	1.856	0.002	0.020	0.492	1710
REACTOME_HEPARAN_SULFATE _HEPARIN_HS_GAG_METABOLIS M	34	0.564	1.837	0.004	0.027	0.597	2418
REACTOME_SIGNALING_BY_REC EPTOR_TYROSINE_KINASES	377	0.387	1.813	0.000	0.036	0.719	2147

REACTOME_GAP_JUNCTION_ASS EMBL	18	0.647	1.808	0.000	0.037	0.739	1710
REACTOME_REGULATION_OF_E XPRESSON_OF_SLITS_AND_ROB OS	156	0.424	1.807	0.000	0.037	0.740	4025
REACTOME_COLLAGEN_BIOSYN THESIS_AND_MODIFYING_ENZY MES	33	0.557	1.807	0.004	0.036	0.741	1728
REACTOME_UPTAKE_AND_ACTI ONS_OF_BACTERIAL_TOXINS	23	0.594	1.806	0.002	0.036	0.750	2848
REACTOME_NEGATIVE_REGULA TION_OF_MAPK_PATHWAY	42	0.527	1.796	0.000	0.039	0.789	4650
REACTOME_RHO_GTPASES_ACTI VATE_IQGAPS	23	0.598	1.795	0.000	0.039	0.789	1751
REACTOME_TOLL_LIKE_RECEPTO R_TLR1_TLR2_CASCADE	82	0.456	1.790	0.000	0.041	0.815	2936
REACTOME_SELENOAMINO_ACI D_METABOLISM	107	0.445	1.785	0.002	0.043	0.832	4689
REACTOME_SEALING_OF_THE_N UCLEAR_ENVELOPE_NE_BY_ESC RT_III	24	0.603	1.782	0.004	0.044	0.844	3118
REACTOME_ACTIVATION_OF_TH E_MRNA_UPON_BINDING_OF_T HE_CAP_BINDING_COMPLEX_AN D_EIFS_AND_SUBSEQUENT_BIN DING_TO_43S	56	0.483	1.756	0.002	0.058	0.908	4732
REACTOME_NEGATIVE_REGULA TION_OF_FGFR2_SIGNALING	20	0.613	1.753	0.007	0.059	0.914	2088
REACTOME_GAP_JUNCTION_TR AFFICKING_AND_REGULATION	31	0.555	1.753	0.002	0.058	0.915	1857
REACTOME_NEGATIVE_REGULA TION_OF_FGFR4_SIGNALING	21	0.604	1.750	0.004	0.059	0.923	2088
REACTOME_GRB2_SOS_PROVID ES_LINKAGE_TO_MAPK_SIGNALI NG_FOR_INTEGRINS_	11	0.692	1.748	0.013	0.059	0.926	897
REACTOME_RESPONSE_OF_EIF2 AK1_HRI_TO_HEME_DEFICIENCY	15	0.655	1.748	0.011	0.058	0.926	2415
REACTOME_PI3K_AKT_SIGNALIN G_IN_CANCER	66	0.473	1.747	0.002	0.058	0.931	1771
REACTOME_DEFECTIVE_EXT2_C AUSES_EXOSTOSES_2	10	0.748	1.745	0.007	0.059	0.935	2212
REACTOME_TRANSPORT_OF_CO NNEXONS_TO_THE_PLASMA_M EMBRANE	12	0.707	1.744	0.002	0.058	0.937	1710
REACTOME_SIGNALING_BY_ROB O_RECEPTORS	191	0.400	1.743	0.000	0.058	0.940	4025
REACTOME_HSP90_CHAPERONE _CYCLE_FOR_STEROID_HORMO NE_RECEPTORS_SHR_	44	0.507	1.741	0.005	0.059	0.944	2078
REACTOME_ACTIVATION_OF_N MDA_RECEPTORS_AND_POSTSY NAPTIC_EVENTS	63	0.459	1.723	0.002	0.070	0.973	2486

REACTOME_NEGATIVE_REGULATION_OF_THE_PI3K_AKT_NETWORK	70	0.464	1.722	0.000	0.070	0.975	2759
REACTOME_ACETYLCHOLINE_BINDING_AND_DOWNSTREAM_EVENTS	5	0.888	1.721	0.009	0.070	0.977	123
REACTOME_NEGATIVE_REGULATION_OF_FGFR3_SIGNALING	20	0.608	1.718	0.009	0.071	0.981	2088
REACTOME_POST_TRANSLATIONAL_MODIFICATION_SYNTHESIS_OF_GPI_ANCHORED_PROTEINS	40	0.509	1.713	0.007	0.075	0.984	1207
REACTOME_COPI_INDEPENDENT_GOLGI_TO_ER_RETROGRADE_TRAFFIC	41	0.506	1.710	0.005	0.076	0.986	2360
REACTOME_FLT3_SIGNALING	217	0.385	1.707	0.000	0.077	0.989	3989
REACTOME_INTERLEUKIN_6_FAMILY_SIGNALING	14	0.646	1.707	0.011	0.075	0.989	3707
REACTOME_CTLA4_INHIBITORY_SIGNALING	18	0.609	1.704	0.011	0.077	0.990	2441
REACTOME_NERVOUS_SYSTEM_DEVELOPMENT	448	0.359	1.704	0.000	0.076	0.990	4044
REACTOME_CELL_SURFACE_INTERACTIONS_AT_THE_VASCULAR_WALL	75	0.445	1.703	0.000	0.076	0.990	1657
REACTOME_P75NTR_NEGATIVELY_REGULATES_CELL_CYCLE_VIA_SC1	5	0.859	1.697	0.004	0.079	0.992	6
REACTOME_CARGO_CONCENTRATION_IN_THE_ER	31	0.531	1.696	0.009	0.079	0.992	2582
REACTOME_PLATELET_ACTIVATION_SIGNALING_AND_AGGREGATION	167	0.400	1.695	0.000	0.079	0.992	2675
REACTOME_INSULIN_RECEPTOR_RECYCLING	21	0.589	1.695	0.009	0.078	0.992	3485
REACTOME_MAPK_FAMILY_SIGNALING_CASCADES	245	0.379	1.693	0.000	0.078	0.992	3989
REACTOME_SIGNALING_BY_EGFR_IN_CANCER	20	0.584	1.692	0.018	0.078	0.992	2078
REACTOME_HEMOSTASIS	385	0.359	1.690	0.000	0.079	0.993	2383
REACTOME_NEUTROPHIL_DEGRANULATION	342	0.359	1.687	0.000	0.081	0.994	2892
REACTOME_VOLTAGE_GATED_POTASSIUM_CHANNELS	12	0.654	1.682	0.019	0.083	0.995	513
REACTOME_NEURONAL_SYSTEM	196	0.387	1.680	0.000	0.084	0.996	2209
REACTOME_ESTROGEN_DEPENDENT_NUCLEAR_EVENTS_DOWNSTREAM_OF_ESR_MEMBRANE_SIGNALING	20	0.584	1.678	0.014	0.085	0.996	2026
REACTOME_MAPK_TARGETS_NUCLEAR_EVENTS_MEDIATED_BY_MAP_KINASES	29	0.533	1.676	0.005	0.086	0.996	2088

REACTOME_DERMATAN_SULFATE_BIOSYNTHESIS	5	0.861	1.670	0.002	0.090	0.997	850
REACTOME_ATTENUATION_PHASE	23	0.566	1.669	0.013	0.089	0.997	4503
REACTOME_TOLL_LIKE_RECEPTOR_4_TLR4_CASCADE	106	0.410	1.669	0.000	0.088	0.997	2936
REACTOME_RHO_GTPASES_ACTIVATION_CIT	18	0.586	1.669	0.007	0.088	0.999	3725
REACTOME_PEPTIDE_LIGAND_BINDING_RECEPTORS	37	0.502	1.668	0.012	0.088	0.999	1549
REACTOME_CHONDROITIN_SULFATE_BIOSYNTHESIS	13	0.664	1.668	0.011	0.087	0.999	1010
REACTOME_BASIGIN_INTERACTIONS	19	0.588	1.665	0.013	0.089	0.999	4186
REACTOME_SIGNAL_ATTENUATION	9	0.717	1.664	0.010	0.089	0.999	1544
REACTOME_YAP1_AND_WWTR1_TAZ_STIMULATED_GENE_EXPRESSION	12	0.671	1.663	0.013	0.089	0.999	2187
REACTOME_CHYLOMICRON_ASSEMBLY	3	0.979	1.662	0.000	0.089	0.999	191
REACTOME_MUSCLE_CONTRACTION	99	0.421	1.661	0.003	0.089	0.999	2515
REACTOME_LGI_ADAM_INTERACTIONS	6	0.822	1.660	0.010	0.089	0.999	1110
REACTOME_ER_TO_GOLGI_ANTEROGRADE_TRANSPORT	139	0.396	1.660	0.002	0.088	0.999	2468
REACTOME_NCAM_SIGNALING_FOR_NEURITE_OUT_GROWTH	34	0.507	1.658	0.014	0.088	0.999	579
REACTOME_LOSS_OF_FUNCTION_OF_SMAD2_3_IN_CANCER	7	0.765	1.657	0.011	0.089	0.999	2988
REACTOME_TYPE_I_HEMIDESMOsome_ASSEMBLY	9	0.715	1.656	0.017	0.089	0.999	2065
REACTOME_PROTEIN_PROTEIN_INTERACTIONS_AT_SYNAPSES	50	0.468	1.653	0.005	0.090	1.000	2063
REACTOME_RAB_GERANYLGERANYLATION	48	0.470	1.653	0.003	0.090	1.000	4020
REACTOME_SIGNALING_BY_INTERLEUKINS	302	0.360	1.648	0.000	0.093	1.000	3243
REACTOME_GPCR_LIGAND_BINDING	106	0.410	1.648	0.000	0.093	1.000	1689
REACTOME_CELL_JUNCTION_ORGANIZATION	59	0.461	1.648	0.002	0.092	1.000	1751
REACTOME_POST_CHAPERONIN_TUBULIN_FOLDING_PATHWAY	17	0.600	1.645	0.017	0.094	1.000	2421
REACTOME_SIGNALING_BY_INSULIN_RECEPTOR	54	0.461	1.643	0.004	0.095	1.000	3485
REACTOME_HS_GAG_DEGRADATION	17	0.601	1.637	0.025	0.099	1.000	2177
REACTOME_INTERLEUKIN_17_SIGNALING	65	0.439	1.636	0.008	0.099	1.000	2911
REACTOME_RAF_INDEPENDENT_MAPK1_3_ACTIVATION	22	0.560	1.634	0.017	0.101	1.000	4416

REACTOME_RHO_GTPASES_ACTIVATE_WASPS_AND WAVES	33	0.517	1.633	0.007	0.100	1.000	3912
REACTOME_SIGNALING_BY_TGF_BETA_RECEPTOR_COMPLEX_IN_CANCER	8	0.729	1.632	0.015	0.100	1.000	3446
REACTOME_NEGATIVE_REGULATION_OF_FGFR1_SIGNALING	20	0.574	1.631	0.016	0.101	1.000	2088
REACTOME_INTEGRIN_SIGNALING	21	0.550	1.628	0.019	0.102	1.000	2038
REACTOME_INFLUENZA_INFECTION	151	0.381	1.625	0.000	0.106	1.000	4025
REACTOME_EGFR_DOWNREGULATION	25	0.534	1.621	0.014	0.108	1.000	1986
REACTOME_TOLL_LIKE_RECEPTOR_9_TLR9_CASCADE	85	0.418	1.620	0.005	0.108	1.000	2936
REACTOME_TRANSLOCATION_OF_SLC2A4 GLUT4_TO_THE_PLASMA_MEMBRANE	63	0.441	1.620	0.009	0.108	1.000	3691
REACTOME_GROWTH_HORMONE_RECEPTOR_SIGNALING	19	0.575	1.619	0.018	0.108	1.000	3480
REACTOME_SIGNALING_BY_PDGFR	40	0.486	1.616	0.006	0.110	1.000	846
REACTOME_CELLULAR_RESPONSES_TO_EXTERNAL_STIMULI	499	0.338	1.615	0.000	0.110	1.000	3576
REACTOME_RHO_GTPASES_ACTIVATE_PKNS	39	0.469	1.613	0.010	0.111	1.000	3507
REACTOME_REGULATION_OF_TLR_BY_ENDOGENOUS_LIGAND	5	0.822	1.613	0.010	0.111	1.000	355
REACTOME_REGULATION_OF_INSULIN_LIKE_GROWTH_FACTOR_IGF_TRANSPORT_AND_UPTAKE_BY_INSULIN_LIKE_GROWTH_FACTOR_BINDING_PROTEINS_IGFBPS	65	0.434	1.611	0.005	0.111	1.000	2249
REACTOME_O_GLYCOSYLATION_OF_TSR_DOMAIN_CONTAINING_PROTEINS	20	0.565	1.611	0.023	0.111	1.000	1450
REACTOME_PLASMA_LIPOPROTEIN_REMODELING	15	0.603	1.606	0.026	0.115	1.000	1700
REACTOME_TRAF6_MEDIATED_INDUCION_OF_TAK1_COMPLEX_WITHIN_TLR4_COMPLEX	14	0.619	1.604	0.031	0.117	1.000	1569
REACTOME_CLASS_A_1_RHODOPSIN_LIKE_RECEPTORS	65	0.428	1.603	0.007	0.117	1.000	1549
REACTOME_ACTIVATION_OF_IRF3_IRF7_MEDIATED_BY_TBK1_IKK_EPSILON	15	0.608	1.602	0.016	0.117	1.000	1755
REACTOME_TRANSFERRIN_ENDOCYTOSIS_AND_RECYCLING	26	0.531	1.602	0.019	0.116	1.000	3485
REACTOME_HS_GAG_BIOSYNTHESIS	18	0.579	1.602	0.021	0.116	1.000	2820
REACTOME_SPRY_REGULATION_OF_FGF_SIGNALING	16	0.600	1.600	0.027	0.116	1.000	2088

REACTOME_EGFR_INTERACTS_WITH_PHOSPHOLIPASE_C_GAMMA	5	0.831	1.599	0.020	0.117	1.000	922
REACTOME_ACTIVATION_OF_BAD_AND_TRANSLOCATION_TO_MITOCHONDRIA	15	0.596	1.599	0.039	0.116	1.000	3691
REACTOME_ADVANCED_GLYCOYLATION_ENDPRODUCT_RECEPTOR_SIGNALING	10	0.672	1.599	0.029	0.115	1.000	2936
REACTOME_ION_TRANSPORT_BY_P_TYPE_ATPASES	36	0.487	1.598	0.020	0.115	1.000	1427
REACTOME_TOLL_LIKE_RECEPTOR_10_TLR10_CASCADE	77	0.429	1.597	0.007	0.115	1.000	2936
REACTOME_DEFECTIVE_CHST14_CAUSES_EDS_MUSCULOCONTRACTURAL_TYPE	3	0.933	1.595	0.004	0.116	1.000	850
REACTOME_CREB1_PHOSPHORYLATION_THROUGH_NMDA_RECEPTOR_MEDIATED_ACTIVATION_OF_RAS_SIGNALING	22	0.535	1.593	0.009	0.118	1.000	649
REACTOME_REGULATION_OF_LOCALIZATION_OF_FOXO_TRANSCRIPTION_FACTORS	12	0.639	1.590	0.033	0.121	1.000	3691
REACTOME_SIGNALLING_TO_ERKS	30	0.498	1.585	0.021	0.125	1.000	4322
REACTOME_NEUROTRANSMITTER_RECEPTORS_AND_POSTSYNAPTIC_SIGNAL_TRANSMISSION	109	0.393	1.585	0.002	0.125	1.000	2182
REACTOME_MYD88_INDEPENDENT_TLR4_CASCADE	90	0.400	1.584	0.007	0.125	1.000	2936
REACTOME_COPII_MEDIATED_VESICLE_TRANSPORT	66	0.426	1.578	0.003	0.131	1.000	2582
REACTOME_COPI_MEDIATED_ANTEROGRADE_TRANSPORT	88	0.399	1.575	0.008	0.133	1.000	3023
REACTOME_P130CAS_LINKAGE_TO_MAPK_SIGNALING_FOR_INTEGRINS	11	0.647	1.574	0.037	0.133	1.000	897
REACTOME_TRANSMISSION_ACROSS_CHEMICAL_SYNAPSES	139	0.375	1.574	0.003	0.133	1.000	2182
REACTOME_GENERATION_OF_SECOND_MESSENGER_MOLECULES	13	0.621	1.572	0.034	0.134	1.000	1595
REACTOME_OLFACTORY_SIGNALING_PATHWAY	8	0.712	1.569	0.024	0.136	1.000	2916
REACTOME_CELL_CELL_COMMUNICATION	84	0.401	1.569	0.005	0.136	1.000	1751
REACTOME_DISEASES_OF_GLYCOSYLATION	97	0.395	1.567	0.010	0.137	1.000	1630
REACTOME_PLASMA_LIPOPROTEIN_ASSEMBLY_REMODELING_AND_CLEARANCE	47	0.450	1.564	0.004	0.140	1.000	817
REACTOME_SIGNAL_TRANSDUCTION_BY_L1	17	0.570	1.555	0.023	0.150	1.000	3355

REACTOME_PARASITE_INFECTIO N	48	0.444	1.554	0.017	0.151	1.000	3912
REACTOME_PYRIMIDINE_SALVA GE	8	0.682	1.551	0.041	0.153	1.000	2256
REACTOME_AGGREPHAGY	32	0.485	1.549	0.029	0.154	1.000	2078
REACTOME_WNT_LIGAND_BIOG ENESIS_AND_TRAFFICKING	13	0.591	1.545	0.036	0.159	1.000	617
REACTOME_DEFECTIVE_CHST3_ CAUSES_SEDCJD	3	0.921	1.543	0.008	0.161	1.000	1010
REACTOME_IMMUNOREGULATO RY_INTERACTIONS_BETWEEN_A _LYMPHOID_AND_A_NON_LYM PHOID_CELL	29	0.484	1.543	0.026	0.161	1.000	1740
REACTOME_ACTIVATION_OF_TH E_AP_1_FAMILY_OF_TRANSCRIP TION_FACTORS	9	0.680	1.539	0.047	0.165	1.000	1028
REACTOME_REVERSIBLE_HYDRA TION_OF CARBON_DIOXIDE	7	0.715	1.529	0.031	0.177	1.000	2164
REACTOME_TP53_REGULATES_ METABOLIC_GENES	81	0.397	1.528	0.012	0.177	1.000	3381
REACTOME_TGF_BETA_RECEPTO R_SIGNALING_ACTIVATES_SMAD S	32	0.473	1.527	0.034	0.178	1.000	3779
REACTOME_CLASS_C_3_METAB OTROPIC_Glutamate_PHEROM ONE_RECEPTORS_	3	0.908	1.526	0.012	0.178	1.000	782
REACTOME_MAP2K_AND_MAPK _ACTIVATION	35	0.456	1.524	0.035	0.180	1.000	1751
REACTOME_COMPLEMENT_CAS CADE	15	0.575	1.522	0.037	0.182	1.000	2284
REACTOME_DISEASES_OF_SIGN AL_TRANSDUCTION_BY_GROWT H_FACTOR_RECEPTORS_AND_SE COND_MESSENGERS	329	0.328	1.520	0.000	0.184	1.000	3989
REACTOME_REGULATION_OF_G LYCOLYSIS_BY_FRUCTOSE_2_6_B ISPHOSPHATE_METABOLISM	10	0.641	1.520	0.043	0.183	1.000	2666
REACTOME_TP53_REGULATES_T RANSCRIPTION_OF_GENES_INV OLVED_IN_CYTOCHROME_C_REL EASE	18	0.543	1.520	0.034	0.182	1.000	2991
REACTOME_SYNAPTIC_ADHESIO N_LIKE_MOLECULES	14	0.575	1.520	0.043	0.182	1.000	3181
REACTOME_IL_6_TYPE_CYTOKIN E_RECEPTOR_LIGAND_INTERACT IONS	8	0.686	1.516	0.046	0.186	1.000	1206
REACTOME_ACTIVATION_OF_C3 _AND_C5	5	0.773	1.512	0.045	0.191	1.000	2284
REACTOME_HDL_REMODELING	4	0.833	1.511	0.032	0.191	1.000	1370
REACTOME_GAB1_SIGNALOSOM E	12	0.617	1.510	0.060	0.192	1.000	922

REACTOME_CREB_PHOSPHORYLATION	7	0.698	1.509	0.058	0.191	1.000	1445
REACTOME_HSF1_DEPENDENT_TRANSACTIVATION	31	0.470	1.507	0.031	0.194	1.000	4731
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_DIFFERENTIATION_OF_MYELOID_CELLS	5	0.762	1.506	0.049	0.194	1.000	2775
REACTOME_PHYSIOLOGICAL_FACTORS	7	0.692	1.506	0.055	0.193	1.000	2187
REACTOME_MATURATION_OF_SPIKE_PROTEIN	5	0.784	1.504	0.044	0.196	1.000	229
REACTOME_NUCLEOTIDE_SALVAGE	19	0.538	1.502	0.039	0.198	1.000	2256
REACTOME_INTERLEUKIN_4_AND_INTERLEUKIN_13_SIGNALING	62	0.413	1.501	0.024	0.198	1.000	1678
REACTOME_ION_CHANNEL_TRANSPORT	111	0.370	1.499	0.005	0.199	1.000	2641
REACTOME_REGULATION_OF_GENE_EXPRESSION_BY_HYPOXIA_INDUCIBLE_FACTOR	9	0.652	1.495	0.045	0.204	1.000	3280
REACTOME_HIGHLY_CALCIIUM_PERMEABLE_NICOTINIC_ACETYLCHOLINE_RECEPTORS	4	0.811	1.493	0.049	0.206	1.000	99
REACTOME_INTERLEUKIN_12_FAMILY_SIGNALING	42	0.431	1.492	0.037	0.207	1.000	4097
REACTOME_VITAMIN_C_ASCORBATE_METABOLISM	7	0.700	1.491	0.045	0.208	1.000	3079
REACTOME_FOXO_MEDIATED_TRANSCRIPTION_OF_CELL_CYCLE_GENES	16	0.539	1.488	0.058	0.211	1.000	1909
REACTOME_SIGNALING_BY_MIRAS_COMPLEX_MUTANTS	8	0.662	1.487	0.055	0.211	1.000	3789
REACTOME_INTERLEUKIN_10_SIGNALING	18	0.539	1.486	0.049	0.212	1.000	1229
REACTOME_SCAVENGING_BY_CLASS_F_RECEPTORS	4	0.806	1.482	0.048	0.217	1.000	2078
REACTOME_UPTAKE_AND_FUNCTION_OF_DIPHTHERIA_TOXIN	6	0.734	1.482	0.050	0.216	1.000	2078
REACTOME_NR1H3_NR1H2_REGULATE_GENE_EXPRESSION_LINKED_TO_CHOLESTEROL_TRANSPORT_AND_EFFLUX	31	0.460	1.482	0.036	0.216	1.000	2974
REACTOME_PLATELET_AGGREGATION_PLUG_FORMATION	24	0.491	1.481	0.058	0.216	1.000	2038
REACTOME_HIGHLY_CALCIIUM_PERMEABLE_POSTSYNAPTIC_NICOTINIC_ACETYLCHOLINE_RECEPTORS	4	0.811	1.481	0.045	0.215	1.000	99
REACTOME_PEPTIDE_HORMONE_BIOSYNTHESIS	3	0.905	1.480	0.021	0.214	1.000	562
REACTOME_P75NTR_REGULATES_AXONOGENESIS	5	0.751	1.479	0.061	0.215	1.000	6

REACTOME_INFECTION_WITH_MYCOBACTERIUM_TUBERCULOSIS	23	0.499	1.477	0.052	0.217	1.000	2576
REACTOME_UREA_CYCLE	5	0.761	1.476	0.042	0.219	1.000	572
REACTOME_DEFECTIVE_CHSY1_CAUSES_TPBS	3	0.879	1.475	0.022	0.219	1.000	354
REACTOME_PECAM1_INTERACTIONS	10	0.615	1.475	0.072	0.218	1.000	862
REACTOME_GOLGI_TO_ER_RETROGRADE_TRANSPORT	118	0.360	1.472	0.017	0.222	1.000	2582
REACTOME_COPI_DEPENDENT_GOLGI_TO_ER_RETROGRADE_TRAFFIC	88	0.377	1.469	0.018	0.226	1.000	2582
REACTOME_AKT_PHOSPHORYLATES_TARGETS_IN_THE_NUCLEUS	10	0.625	1.467	0.072	0.228	1.000	2117
REACTOME_RESPONSE_OF_MTB_TO_PHAGOCYTOSIS	21	0.511	1.467	0.068	0.228	1.000	2576
REACTOME_ERK_MAPK_TARGETS	21	0.503	1.465	0.048	0.230	1.000	2574
REACTOME_GASTRIN_CREB_SIGNALING_PATHWAY_VIA_PKC_AND_MAPK	14	0.558	1.464	0.059	0.231	1.000	649
REACTOME_NEGATIVE_FEEDBACK_REGULATION_OF_MAPK_PATHWAY	6	0.704	1.462	0.055	0.231	1.000	1476
REACTOME_REGULATION_OF_IFNG_SIGNALING	13	0.579	1.461	0.055	0.232	1.000	4357
REACTOME_TRANSPORT_TO_THE_GOLGI_AND_SUBSEQUENT_MODIFICATION	159	0.341	1.461	0.013	0.231	1.000	2582
REACTOME_EPHRIN_SIGNALING	17	0.532	1.461	0.063	0.231	1.000	2694
REACTOME_ATF6_ATF6_ALPHA_ACTIVATES_CHAPERONES	12	0.580	1.459	0.070	0.232	1.000	4029
REACTOME_REGULATION_OF_COMMISSURAL_AXON_PATHFINDING_BY_SLIT_AND_ROBO	4	0.802	1.459	0.044	0.231	1.000	1185
REACTOME_IKK_COMPLEX_RECRUITMENT_MEDIATED_BY_RIP1	21	0.500	1.458	0.066	0.232	1.000	1722
REACTOME_DISEASES_ASSOCIATED_WITH_GLYCOSAMINOGLYCAN_METABOLISM	27	0.466	1.457	0.049	0.232	1.000	2212
REACTOME_L1CAM_INTERACTIONS	84	0.383	1.455	0.025	0.235	1.000	1959
REACTOME_PTK6_REGULATES_RHO_GTPASES_RAS_GTPASE_AND_MAP_KINASES	13	0.562	1.452	0.088	0.238	1.000	4150
REACTOME_SHC_MEDIATED_CASCADE_FGFR4	10	0.598	1.452	0.065	0.238	1.000	1020
REACTOME_DEFECTIVE_C1GALT1C1_CAUSES_TN_POLYAGGLUTINATION_SYNDROME_TNPS	5	0.753	1.451	0.054	0.239	1.000	3026

REACTOME_DISEASES_OF_META BOLISM	165	0.340	1.450	0.009	0.238	1.000	2234
REACTOME_PRESYNAPTIC_DEPO LARIZATION_AND_CALCIIUM_CH ANNEL_OPENING	4	0.789	1.450	0.053	0.238	1.000	635
REACTOME_NEGATIVE_REGULA TION_OF_TCF_DEPENDENT_SIG NALING_BY_WNT_LIGAND_ANT AGONISTS	5	0.748	1.450	0.079	0.238	1.000	27
REACTOME_RSK_ACTIVATION	7	0.670	1.449	0.056	0.237	1.000	649
REACTOME_INSULIN_RECEPTOR _SIGNALING_CASCADE	34	0.449	1.448	0.047	0.238	1.000	1544
REACTOME_IONOTROPIC_ACTIVI TY_OF_KAINATE_RECEPTORS	6	0.711	1.447	0.060	0.239	1.000	2486
REACTOME_VISUAL_PHOTOTRA NSDUCTION	47	0.418	1.447	0.042	0.239	1.000	2414
REACTOME_DOWNREGULATION _OF_TGF_BETA_RECEPTOR_SIGN ALING	26	0.473	1.446	0.049	0.239	1.000	3229
REACTOME_EXTRA_NUCLEAR_E STROGEN_SIGNALING	52	0.412	1.446	0.033	0.238	1.000	2180
REACTOME_CD28_DEPENDENT_ VAV1_PATHWAY	8	0.640	1.444	0.075	0.240	1.000	2378
REACTOME_VLDL_ASSEMBLY	2	0.951	1.441	0.012	0.244	1.000	406
REACTOME_DISEASES_ASSOCIAT ED_WITH_O_GLYCOSYLATION_O F_PROTEINS	36	0.440	1.438	0.060	0.247	1.000	1630
REACTOME_THE_ROLE_OF_GTSE 1_IN_G2_M_PROGRESSION_AFT ER_G2_CHECKPOINT	69	0.381	1.438	0.031	0.247	1.000	4312
REACTOME_TP53_REGULATES_T RANSCRIPTION_OF_SEVERAL_AD DITIONAL_CELL_DEATH_GENES_ WHOSE_SPECIFIC_ROLES_IN_P5 3_DEPENDENT_APOPTOSIS_REM AIN_UNCERTAIN	12	0.574	1.435	0.088	0.251	1.000	2991
REACTOME_NCAM1_INTERACTI ONS	15	0.540	1.434	0.092	0.251	1.000	579
REACTOME_STRIATED_MUSCLE_ CONTRACTION	15	0.538	1.433	0.077	0.252	1.000	1318
REACTOME_IRS_ACTIVATION	4	0.772	1.432	0.068	0.252	1.000	1544
REACTOME_RAS_ACTIVATION_U PON_CA2_INFLUX_THROUGH_N MDA_RECEPTOR	14	0.538	1.431	0.068	0.253	1.000	3953
REACTOME_SIGNALING_BY_FGF R1	33	0.446	1.429	0.068	0.256	1.000	2125
REACTOME_FORMATION_OF_FI BRIN_CLOT_CLOTTING_CASCADE	18	0.513	1.429	0.086	0.254	1.000	1233
REACTOME_TOLL_LIKE_RECEPTO R_CASCADES	121	0.348	1.428	0.020	0.255	1.000	2936

REACTOME_HIGHLY_SODIUM_P ERMEABLE_POSTSYNAPTIC_ACE TYLCHOLINE_NICOTINIC_RECEPT ORS	2	0.947	1.427	0.012	0.255	1.000	123
REACTOME_GPVI_MEDIATED_A CTIVATION_CASCADE	24	0.466	1.425	0.043	0.258	1.000	3621
REACTOME_RAF_ACTIVATION	32	0.450	1.424	0.034	0.259	1.000	4331
REACTOME_NADE_MODULATES _DEATH_SIGNALLING	5	0.744	1.423	0.079	0.259	1.000	6
REACTOME_PHENYLALANINE_A ND_TYROSINE_METABOLISM	7	0.662	1.423	0.111	0.259	1.000	3191
REACTOME_SIGNALLING_TO_P3 8_VIA_RIT_AND_RIN	2	0.920	1.422	0.031	0.260	1.000	490
REACTOME_MET_RECEPTOR_AC TIVATION	4	0.781	1.421	0.074	0.261	1.000	2790
REACTOME_NOTCH2_ACTIVATIO N_AND_TRANSMISSION_OF_SIG NAL_TO_THE_NUCLEUS	20	0.486	1.420	0.080	0.260	1.000	1569
REACTOME_INTERLEUKIN_7_SIG NALING	16	0.528	1.416	0.070	0.266	1.000	56
REACTOME_CARDIAC_CONDUCT ION	65	0.387	1.415	0.031	0.268	1.000	1376
REACTOME_RESPIRATORY_ELEC TRON_TRANSPORT	90	0.363	1.412	0.041	0.271	1.000	4134
REACTOME_ESR_MEDIATED_SIG NALING	142	0.334	1.412	0.016	0.270	1.000	2236
REACTOME_SIGNALING_BY_FGF R4	30	0.453	1.411	0.059	0.272	1.000	2088
REACTOME_SIGNALING_BY_GPC R	314	0.305	1.411	0.003	0.271	1.000	1715
REACTOME_INITIAL_TRIGGERIN G_OF_COMPLEMENT	7	0.662	1.409	0.089	0.272	1.000	2284
REACTOME_IRAK4_DEFICIENCY_ TLR2_4_	5	0.717	1.407	0.082	0.275	1.000	317
REACTOME_DEFECTIVE_FACTOR _IX_CAUSES_HEMOPHILIA_B	3	0.830	1.406	0.066	0.276	1.000	333
REACTOME_MET_ACTIVATES_PT K2_SIGNALING	20	0.499	1.406	0.073	0.275	1.000	1771
REACTOME_GLYCOSAMINOGLYC AN_METABOLISM	85	0.366	1.404	0.045	0.277	1.000	2212
REACTOME_FGFR3B_LIGAND_BI NDING_AND_ACTIVATION	3	0.820	1.401	0.088	0.281	1.000	1136
REACTOME_POTASSIUM_CHAN NELS	33	0.441	1.399	0.069	0.284	1.000	2318
REACTOME_CREATION_OF_C4_ AND_C2_ACTIVATORS	2	0.933	1.399	0.048	0.283	1.000	848
REACTOME_PTK6_PROMOTES_H IF1A_STABILIZATION	3	0.845	1.396	0.070	0.287	1.000	1421
REACTOME_METABOLISM_OF_F AT_SOLUBLE_VITAMINS	27	0.460	1.395	0.091	0.287	1.000	2414
REACTOME_EXTRINSIC_PATHWA Y_OF_FIBRIN_CLOT_FORMATIO N	4	0.760	1.393	0.095	0.291	1.000	889

REACTOME_RUNX2_REGULATES_GENES_INVOLVED_IN_CELL_MIGRATION	6	0.681	1.392	0.107	0.291	1.000	3691
REACTOME_LAMININ_INTERACTIONS	22	0.465	1.390	0.086	0.294	1.000	1289
REACTOME_SELECTIVE_AUTOPHAGY	69	0.371	1.389	0.049	0.294	1.000	2103
REACTOME_INTERLEUKIN_6_SIGNALING	10	0.570	1.388	0.104	0.296	1.000	3707
REACTOME_CROSS_PRESENTATION_OF_PARTICULATE_EXOGENOUS_ANTIGENS_PHAGOSOMES	3	0.810	1.387	0.098	0.296	1.000	1792
REACTOME_ABC_TRANSPORTERS_IN_LIPID_HOMEOSTASIS	9	0.590	1.387	0.114	0.295	1.000	2740
REACTOME_SHC_MEDIATED_CASCADE_FGFR3	9	0.595	1.386	0.110	0.296	1.000	1136
REACTOME_SIGNALING_BY_LEPTIN	10	0.577	1.386	0.117	0.295	1.000	3480
REACTOME_DEFECTS_OF_CONTACT_ACTIVATION_SYSTEM_CASCADE_AND_KALLIKREIN_KININ_SYSTEM	8	0.626	1.386	0.117	0.294	1.000	1170
REACTOME_COMMON_PATHWAY_OF_FIBRIN_CLOT_FORMATION	11	0.556	1.381	0.119	0.302	1.000	1233
REACTOME_RHO_GTPASES_ACTIVATE_ROCKS	18	0.501	1.380	0.084	0.302	1.000	3725
REACTOME_NEGATIVE_REGULATION_OF_NMDA_RECEPTOR_MEDIATED_NEURONAL_TRANSMISSION	12	0.547	1.379	0.097	0.303	1.000	2486
REACTOME_FGFR1_MODULATION_OF_FGFR1_SIGNALING	5	0.699	1.379	0.106	0.303	1.000	2125
REACTOME_SMOOTH_MUSCLE_CONTRACTION	25	0.456	1.378	0.088	0.303	1.000	1792
REACTOME_COSTIMULATION_BY_THE_CD28_FAMILY	44	0.395	1.377	0.069	0.304	1.000	2441
REACTOME_INTERLEUKIN_2_SIGNALING	7	0.648	1.377	0.113	0.303	1.000	1162
REACTOME_HSF1_ACTIVATION	26	0.450	1.376	0.092	0.303	1.000	3861
REACTOME_RHO_GTPASE_EFFECTORS	241	0.307	1.376	0.013	0.303	1.000	3639
REACTOME_MISSPLICED_LRP5_MUTANTS_HAVE_ENHANCED_BETA_CATENIN_DEPENDENT_SIGNALING	4	0.753	1.376	0.112	0.302	1.000	27
REACTOME_RHO_GTPASES_ACTIVATE_PAKS	19	0.484	1.375	0.111	0.302	1.000	3943
REACTOME_SPERM_MOTILITY_AND_TAXES	2	0.920	1.374	0.040	0.303	1.000	152
REACTOME_RESPIRATORY_ELECTRON_TRANSPORT_ATP_SYNTHESIS_BY_CHEMIOSMOTIC_COUPLING	110	0.338	1.373	0.029	0.304	1.000	4134

NG_AND_HEAT_PRODUCTION_BY_UNCOUPLING_PROTEINS_REACTOME_TCR_SIGNALING	94	0.344	1.372	0.034	0.304	1.000	4312
REACTOME_UPTAKE_AND_FUNCTION_OF_ANTHRAX_TOXINS	11	0.564	1.370	0.106	0.307	1.000	3943
REACTOME_SYNTHESIS_OF_ACTIVE_UBIQUITIN_ROLES_OF_E1_AND_E2_ENZYMES	30	0.439	1.370	0.084	0.307	1.000	4884
REACTOME_NOSTRIN_MEDIATED_ENOS_TRAFFICKING	3	0.809	1.368	0.111	0.308	1.000	206
REACTOME_INTERLEUKIN_3_INTERLEUKIN_5_AND_GM-CSF_SIGNALING	34	0.415	1.366	0.063	0.311	1.000	3779
REACTOME_DEFECTIVE_FACTOR_VIII_CAUSES_HEMOPHILIA_A	6	0.661	1.365	0.118	0.311	1.000	1170
REACTOME_ACTIVATION_OF_THE_PHOTOTRANSDUCTION_CASCADE	2	0.878	1.365	0.086	0.312	1.000	232
REACTOME_RECEPTOR_MEDIATED_MITOPHAGY	11	0.561	1.364	0.114	0.312	1.000	3677
REACTOME_PLATELET_SENSITIZATION_BY_LDL	13	0.535	1.363	0.135	0.313	1.000	3243
REACTOME_UNFOLDED_PROTEIN_RESPONSE_UPR	87	0.344	1.360	0.051	0.317	1.000	2571
REACTOME_PLASMA_LIPOPROTEIN_CLEARANCE	27	0.445	1.360	0.099	0.316	1.000	817
REACTOME_IRON_UPTAKE_AND_TRANSPORT	47	0.394	1.359	0.073	0.318	1.000	3808
REACTOME_SEMAPHORIN_INTERACTIONS	51	0.381	1.358	0.064	0.317	1.000	2416
REACTOME_MYOGENESIS	16	0.503	1.358	0.098	0.317	1.000	3680
REACTOME_P38MAPK_EVENTS	13	0.532	1.357	0.104	0.317	1.000	4269
REACTOME_CELLULAR_RESPONSE_TO_HYPOXIA	70	0.361	1.357	0.048	0.316	1.000	4312
REACTOME_ACTIVATED_TAK1_MEDIATES_P38_MAPK_ACTIVATION	23	0.454	1.355	0.095	0.320	1.000	1873
REACTOME_ERYTHROPOIETIN_ACTIVATES_RAS	13	0.523	1.354	0.120	0.320	1.000	3953
REACTOME_CLATHRIN_MEDIATED_ENDOCYTOSIS	116	0.333	1.352	0.035	0.323	1.000	3973
REACTOME_EGR2_AND_SOX10_MEDIATED_INITIATION_OF_SCHWANN_CELL_MYELINATION	24	0.450	1.351	0.106	0.323	1.000	1124
REACTOME_CHYLOMICRON_MODELING	1	0.993	1.351	0.020	0.323	1.000	88
REACTOME_SIGNALING_BY_MET	63	0.363	1.351	0.073	0.322	1.000	3953
REACTOME_METABOLISM_OF_ANGIOTENSINOGEN_TO_ANGIOTENSINS	7	0.636	1.348	0.141	0.326	1.000	2450
REACTOME_IRE1ALPHA_ACTIVATES_CHAPERONES	47	0.384	1.347	0.081	0.327	1.000	2571

REACTOME_ATF6_ATF6_ALPHA_ACTIVATES_CHAPERONE_GENES	10	0.570	1.347	0.140	0.326	1.000	4029
REACTOME_SIGNALING_BY_ERB B4	38	0.406	1.345	0.080	0.328	1.000	1569
REACTOME_PTK6_REGULATES_R TKS_AND_THEIR_EFFECTORS_AK T1_AND_DOK1	9	0.574	1.345	0.129	0.328	1.000	3779
REACTOME_FGFR2_MUTANT_RE CEPTOR_ACTIVATION	19	0.471	1.344	0.115	0.328	1.000	2357
REACTOME_PROLONGED_ERK_A CTIVATION_EVENTS	12	0.534	1.343	0.121	0.330	1.000	4322
REACTOME_EPHA_MEDIATED_G ROWTH_CONE_COLLAPSE	23	0.448	1.342	0.113	0.332	1.000	1596
REACTOME_GLUCURONIDATION REACTOME_SIGNALING_BY_VEG F	4	0.734	1.340	0.147	0.334	1.000	1516
86	0.340	1.339	0.058	0.334	1.000	3953	
REACTOME_SURFACTANT_META BOLISM	11	0.553	1.338	0.119	0.335	1.000	2740
REACTOME_CHYLOMICRON_CLE ARANCE	4	0.724	1.336	0.138	0.338	1.000	692
REACTOME_ONCOGENE_INDUC ED_SENESCENCE	33	0.416	1.330	0.115	0.348	1.000	1769
REACTOME_RAS_SIGNALING_DO WNSTREAM_OF_NF1_LOSS_OF_ FUNCTION_VARIANTS	7	0.636	1.330	0.139	0.348	1.000	3989
REACTOME_PD_1_SIGNALING	6	0.637	1.328	0.161	0.352	1.000	1036
REACTOME_PROLACTIN_RECEPT OR_SIGNALING	10	0.562	1.327	0.142	0.352	1.000	3480
REACTOME_GLYCOGEN_SYNTHE SIS	13	0.526	1.325	0.124	0.355	1.000	1569
REACTOME_FCERI_MEDIATED_ MAPK_ACTIVATION	25	0.431	1.324	0.112	0.355	1.000	3355
REACTOME_SIGNALING_BY_EGF R	42	0.389	1.320	0.099	0.364	1.000	1986
REACTOME_MHC_CLASS_II_ANT IGEN_PRESENTATION	95	0.337	1.319	0.065	0.364	1.000	2543
REACTOME_TP53_REGULATES_T RANSCRIPTION_OF_CELL_DEATH _GENES	37	0.398	1.318	0.094	0.365	1.000	2446
REACTOME_RUNX3_REGULATES _CDKN1A_TRANSCRIPTION	7	0.633	1.316	0.159	0.368	1.000	2991
REACTOME_INTRINSIC_PATHWA Y_OF_FIBRIN_CLOT_FORMATIO N	10	0.552	1.313	0.162	0.372	1.000	333
REACTOME_CS_DS_DEGRADATI ON	9	0.574	1.313	0.138	0.371	1.000	461
REACTOME_ERYTHROCYTES_TAK E_UP_CARBON_DIOXIDE_AND_R LEASE_OXYGEN	6	0.632	1.313	0.161	0.371	1.000	1529
REACTOME_APOBEC3G_MEDIAT ED_RESISTANCE_TO_HIV_1_INFE CTION	5	0.669	1.312	0.177	0.373	1.000	4215

REACTOME_CD163_MEDIATING _AN_ANTI_INFLAMMATORY_RES PONSE	7	0.609	1.311	0.161	0.372	1.000	3309
REACTOME_TRANSLATION	284	0.289	1.310	0.029	0.373	1.000	4231
REACTOME_FERTILIZATION	6	0.643	1.310	0.152	0.373	1.000	830
REACTOME_RET_SIGNALING	29	0.418	1.309	0.131	0.373	1.000	1544
REACTOME_SIGNALING_BY_NUC LEAR_RECEPTORS	195	0.300	1.307	0.039	0.377	1.000	2357
REACTOME_BMAL1_CLOCK_NPA S2_ACTIVATES_CIRCADIAN_GEN E_EXPRESSION	26	0.434	1.307	0.125	0.376	1.000	1886
REACTOME_SIGNALING_BY_PTK 6	42	0.388	1.304	0.114	0.381	1.000	4357
REACTOME_MAPK3_ERK1_ACTI VATION	9	0.560	1.303	0.175	0.381	1.000	3707
REACTOME_PLATELET_HOMEOS TASIS	45	0.377	1.303	0.118	0.381	1.000	2441
REACTOME_SYNTHESIS_OF_PE REACTOME_TOXICITY_OF_BOTU LINUM_TOXIN_TYPE_D_BONT_D	10	0.543	1.303	0.144	0.380	1.000	1456
—	3	0.776	1.302	0.124	0.379	1.000	2848
REACTOME_AUTOPHAGY	134	0.310	1.301	0.063	0.381	1.000	2768
REACTOME_SUPPRESSION_OF_P HAGOSOMAL_MATURATION	12	0.523	1.301	0.161	0.381	1.000	2576
REACTOME_NETRIN_MEDIATED _REPULSION_SIGNALS	4	0.721	1.300	0.155	0.382	1.000	400
REACTOME_EGFR_TRANSACTIVA TION_BY_GASTRIN	7	0.604	1.298	0.173	0.385	1.000	176
REACTOME_KINESINS	50	0.368	1.297	0.085	0.385	1.000	1710
REACTOME_SHC1_EVENTS_IN_E RBB2_SIGNALING	15	0.492	1.296	0.181	0.385	1.000	1398
REACTOME_SHC1_EVENTS_IN_E RBB4_SIGNALING	9	0.577	1.295	0.178	0.387	1.000	816
REACTOME_THYROXINE_BIOSYN THESIS	1	0.963	1.294	0.065	0.388	1.000	464
REACTOME_PREVENTION_OF_P HAGOSOMAL_LYSOSOMAL_FUSI ON	9	0.562	1.294	0.181	0.387	1.000	1977
REACTOME_SIGNALING_BY_MA PK_MUTANTS	7	0.601	1.294	0.178	0.386	1.000	4650
REACTOME_EPHB_MEDIATED_F ORWARD_SIGNALING	39	0.382	1.292	0.125	0.389	1.000	3390
REACTOME_CROSSLINKING_OF_ COLLAGEN_FIBRILS	9	0.551	1.291	0.150	0.391	1.000	1231
REACTOME_REGULATED_PROTE OLYSIS_OF_P75NTR	11	0.522	1.289	0.186	0.393	1.000	6
REACTOME_ADRENOCEPTORS	2	0.850	1.288	0.142	0.394	1.000	320
REACTOME_INTEGRATION_OF_P ROVIRUS	9	0.555	1.287	0.200	0.397	1.000	4837
REACTOME_NRIF_SIGNALS_CELL _DEATH_FROM_THE_NUCLEUS	15	0.492	1.286	0.177	0.396	1.000	1569

REACTOME_INTERLEUKIN_23_SIGNALING	5	0.665	1.286	0.182	0.396	1.000	40
REACTOME_DOWNREGULATION_OF_SMAD2_3_SMAD4_TRANSCRIPTIONAL_ACTIVITY	23	0.431	1.286	0.142	0.395	1.000	3779
REACTOME_DARPP_32_EVENTS	19	0.450	1.283	0.152	0.399	1.000	2088
REACTOME_CARBOXYTERMINAL_POST_TRANSLATIONAL_MODIFICATIONS_OF_TUBULIN	26	0.419	1.281	0.136	0.403	1.000	1710
REACTOME_SERINE_BIOSYNTHESIS	9	0.560	1.280	0.181	0.403	1.000	1648
REACTOME_ASPARAGINE_N_LINKED_GLYCOSYLATION	262	0.284	1.280	0.036	0.403	1.000	2647
REACTOME_CLASS_B_2_SECRETIN_FAMILY_RECEPTORS	38	0.379	1.280	0.144	0.402	1.000	2180
REACTOME_INTERLEUKIN_2_FAMILY_SIGNALING	26	0.412	1.280	0.165	0.401	1.000	3707
REACTOME_SEMA4D_IN_SEMAPHORIN_SIGNALING	23	0.437	1.278	0.147	0.404	1.000	3949
REACTOME_RUNX1_AND_FOXP3_CONTROL_THE_DEVELOPMENT_OF_REGULATORY_T_LYMPHOCYTES_TREGS	5	0.665	1.278	0.178	0.403	1.000	2832
REACTOME_SEMA4D_MEDIATED_INHIBITION_OF_CELL_ATTACHMENT_AND_MIGRATION	8	0.564	1.275	0.182	0.407	1.000	3390
REACTOME_PHASE_3_RAPID_REPOLARISATION	4	0.701	1.274	0.205	0.408	1.000	513
REACTOME_FC_EPSILON_RECEPTOR_FCERI_SIGNALING	117	0.311	1.272	0.076	0.413	1.000	3985
REACTOME_SIGNALING_BY_FGF_R3	30	0.402	1.271	0.137	0.413	1.000	2088
REACTOME_SHC_MEDIATED_CASCADE_FGFR1	9	0.550	1.269	0.175	0.416	1.000	4782
REACTOME_RHO_GTPASES_ACTIVATE_NADPH_OXIDASES	14	0.488	1.269	0.170	0.416	1.000	3243
REACTOME_EPH_EPHRIN_SIGNALING	79	0.330	1.267	0.096	0.418	1.000	1751
REACTOME_VEGF_LIGAND_RECEPTOR_INTERACTIONS	3	0.752	1.266	0.209	0.419	1.000	1649
REACTOME_MET_ACTIVATES_RAP1_AND_RAC1	9	0.550	1.266	0.189	0.419	1.000	4574
REACTOME_ALPHA_PROTEIN_KINASE_1_SIGNALING_PATHWAY	11	0.516	1.264	0.221	0.422	1.000	1569
REACTOME_SIGNALING_BY_FGF_R	65	0.344	1.264	0.115	0.421	1.000	2125
REACTOME_CALCINEURIN_ACTIVATES_NFAT	9	0.558	1.263	0.205	0.421	1.000	4551
REACTOME_SIGNALING_BY_MODERATE_KINASE_ACTIVITY_BRAF_MUTANTS	38	0.380	1.262	0.154	0.423	1.000	1751

REACTOME_UNBLOCKING_OF_NMDA_RECEPTORS_Glutamate_BINDING_AND_ACTIVATION	10	0.526	1.260	0.194	0.426	1.000	3066
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_DIFFERENTIATION_OF_KERATINOCYTES	7	0.584	1.260	0.198	0.425	1.000	1908
REACTOME_RUNX1_REGULATES_GENES_INVOLVED_IN_MEGAKARYOCYTE_DIFFERENTIATION_AND_PLATELET_FUNCTION	44	0.360	1.257	0.141	0.429	1.000	2672
REACTOME_PHOSPHORYLATION_SITE_MUTANTS_OF_CTNNB1_ARE_NOT_TARGETED_TO_THE_PROTEASOME_BY_THE_DESTRUCTIVE_COMPLEX	15	0.466	1.257	0.191	0.430	1.000	3597
REACTOME_INTERLEUKIN_21_SIGNALING	6	0.618	1.256	0.203	0.430	1.000	3707
REACTOME_PHASE_0_RAPID_DEPOLARISATION	16	0.463	1.254	0.183	0.433	1.000	2854
REACTOME_SIGNALING_BY_MST1	5	0.634	1.254	0.203	0.433	1.000	2790
REACTOME_PURINE_SALVAGE	12	0.502	1.254	0.207	0.432	1.000	1328
REACTOME_ONCOGENIC_MAPK_SIGNALING	74	0.332	1.253	0.117	0.431	1.000	4416
REACTOME_FOXO_MEDIATED_TRANSCRIPTION	55	0.344	1.253	0.115	0.431	1.000	3691
REACTOME_ION_HOMEOSTASIS	32	0.388	1.252	0.164	0.432	1.000	1278
REACTOME_ACROSOME_REACTION_AND_SPERM_OOCYTE_Membrane_BINDING	1	0.935	1.251	0.128	0.433	1.000	830
REACTOME_G_ALPHA_I_SIGNALING_EVENTS	145	0.296	1.247	0.093	0.441	1.000	2186
REACTOME_METABOLISM_OF_STEROID_HORMONES	17	0.456	1.246	0.197	0.442	1.000	4118
REACTOME_METABOLISM_OF_CARBONHYDRATES	221	0.279	1.246	0.065	0.441	1.000	2581
REACTOME_COMPETING_ENDOGENOUS_RNAS_CERNAS_REGULATE_PTEN_TRANSLATION	8	0.546	1.244	0.228	0.443	1.000	431
REACTOME_RUNX2_REGULATES_CHONDROCYTE_MATURATION	3	0.736	1.243	0.224	0.445	1.000	1908
REACTOME_HORMONE_LIGAND_BINDING_RECEPTORS	1	0.939	1.243	0.121	0.445	1.000	770
REACTOME_FCERI_MEDIATED_CAMP_2_MOBILIZATION	23	0.414	1.238	0.188	0.454	1.000	1713
REACTOME_DOWNREGULATION_OF_ERBB2_SIGNALING	21	0.421	1.236	0.192	0.457	1.000	2078
REACTOME_SIGNALING_BY_FGF_R2	57	0.342	1.236	0.143	0.457	1.000	2357
REACTOME_EARLY_PHASE_OF_HIV_LIFE_CYCLE	13	0.492	1.234	0.214	0.459	1.000	1800

REACTOME_ENOS_ACTIVATION	10	0.521	1.233	0.215	0.460	1.000	2078
REACTOME_REGULATION_OF_S IGNALING_BY_CBL	20	0.422	1.233	0.191	0.459	1.000	1569
REACTOME_INLA_MEDIATED_EN TRY_OF_LISTERIA_MONOCYTOG ENES_INTO_HOST_CELLS	9	0.538	1.229	0.238	0.468	1.000	3779
REACTOME_NR1H2_AND_NR1H 3_MEDIATED_SIGNALING	37	0.373	1.228	0.173	0.468	1.000	602
REACTOME_DISEASES_OF_CARB OHYDRATE_METABOLISM	27	0.393	1.226	0.182	0.471	1.000	1984
REACTOME_TBC_RABGAPS	39	0.358	1.226	0.151	0.470	1.000	2519
REACTOME_CHAPERONE_MEDIA TED_AUTOPHAGY	17	0.443	1.224	0.196	0.474	1.000	2078
REACTOME_RAP1_SIGNALLING	13	0.474	1.223	0.217	0.475	1.000	3393
REACTOME_RUNX2_REGULATES _BONE_DEVELOPMENT	23	0.407	1.223	0.223	0.474	1.000	1908
REACTOME_LONG_TERM_POTE NTIATION	11	0.489	1.221	0.225	0.477	1.000	2486
REACTOME_THE_CITRIC_ACID_T CA_CYCLE_AND_RESPIRATORY_E LECTRON_TRANSPORT	155	0.287	1.221	0.099	0.477	1.000	4134
REACTOME_SIGNALING_BY_RHO _GTPASES	348	0.263	1.220	0.050	0.477	1.000	2523
REACTOME_SIGNALLING_TO_RA S	17	0.452	1.219	0.228	0.478	1.000	4574
REACTOME_METABOLISM_OF_N ITRIC_OXIDE_NOS3_ACTIVATION _AND_REGULATION	13	0.482	1.218	0.229	0.481	1.000	2078
REACTOME_TYROSINE_CATABOL ISM	3	0.749	1.217	0.226	0.480	1.000	3191
REACTOME_EICOSANOIDS	1	0.914	1.216	0.173	0.482	1.000	1097
REACTOME_GLYCOGEN_METAB OLISM	24	0.411	1.216	0.184	0.481	1.000	1569
REACTOME_LEISHMANIA_INFEC TION	122	0.295	1.214	0.122	0.484	1.000	2269
REACTOME_FCGAMMA_RECEPT OR_FCGR_DEPENDENT_PHAGOC YTOSIS	71	0.321	1.211	0.156	0.490	1.000	3912
REACTOME_ERKS_ARE_INACTIV ATED	13	0.465	1.210	0.237	0.490	1.000	2574
REACTOME_NEUROTOXICITY_OF _CLOSTRIDIUM_TOXINS	6	0.597	1.209	0.276	0.491	1.000	2848
REACTOME_TRAFFICKING_OF_A MPA_RECEPTORS	18	0.441	1.209	0.218	0.492	1.000	3318
REACTOME_SENESCENCE ASSO CIATED_SECRETORY_PHENOTYP E_SASP_	57	0.340	1.209	0.175	0.491	1.000	3185
REACTOME_RNA_POLYMERASE_ III_CHAIN_ELONGATION	18	0.429	1.208	0.224	0.491	1.000	803
REACTOME_RHO_GTPASES_ACTI VATE_RHOTEKIN_AND_RHOPHIL INS	8	0.527	1.208	0.240	0.490	1.000	3484

REACTOME_BIOSYNTHESIS_OF_MARESIN LIKE SPMS	1	0.906	1.206	0.216	0.494	1.000	1194
REACTOME_INSERTION_OF_TAIL_ANCHORED_PROTEINS_INTO_THE_ENDOPLASMIC_RETICULUM_MEMBRANE	21	0.413	1.205	0.208	0.494	1.000	2319
REACTOME_PI_3K_CASCADE_FGFR2	8	0.526	1.200	0.247	0.504	1.000	1020
REACTOME_INTRAFLAGELLAR_TRANSPORT	48	0.341	1.200	0.202	0.503	1.000	1710
REACTOME_MET_PROMOTES_CELL_MOTILITY	30	0.377	1.200	0.227	0.502	1.000	3654
REACTOME_TRANSPORT_OF_SMALL_MOLECULES	455	0.250	1.198	0.069	0.505	1.000	2807
REACTOME_TRANSPORT_OF_NUCLEOTIDE_SUGARS	9	0.509	1.198	0.239	0.504	1.000	3600
REACTOME_AMINO_ACIDS_REGULATE_MTORC1	50	0.339	1.198	0.196	0.504	1.000	2587
REACTOME_ANTIGEN_PROCESSING_CROSS_PRESENTATION	82	0.313	1.197	0.176	0.505	1.000	4312
REACTOME_DECTIN_2_FAMILY	7	0.567	1.194	0.265	0.510	1.000	1022
REACTOME_COMPLEX_I_BIOGENESIS	49	0.339	1.193	0.206	0.511	1.000	4134
REACTOME_NETRIN_1_SIGNALING	36	0.363	1.193	0.205	0.510	1.000	1773
REACTOME_OXIDATIVE_STRESS_INDUCED_SENESCENCE	72	0.316	1.190	0.170	0.515	1.000	1815
REACTOME_IRAK2_MEDIATED_ACTIVATION_OF_TAK1_COMPLEX	10	0.503	1.190	0.254	0.515	1.000	1569
REACTOME_REGULATION_OF_CYTOSKELETAL_REMODELING_AND_CELL_SPREADING_BY_IPP_COMPLEX_COMPONENTS	7	0.549	1.188	0.269	0.519	1.000	4170
REACTOME_INTRA_GOLGI_AND_RETROGRADE_GOLGI_TO_ER_TRAFFIC	183	0.272	1.184	0.125	0.527	1.000	3376
REACTOME_NEF_AND_SIGNAL_TRANSDUCTION	4	0.648	1.183	0.282	0.527	1.000	3874
REACTOME_NUCLEAR_SIGNALING_BY_ERBB4	20	0.419	1.183	0.236	0.526	1.000	3271
REACTOME_ASSEMBLY_OF_ACTIVE_LPL_AND_LIPC_LIPASE_COMPLEXES	11	0.492	1.182	0.271	0.528	1.000	1700
REACTOME_CREATINE_METABOLISM	5	0.608	1.179	0.292	0.533	1.000	774
REACTOME_ERBB2_ACTIVATES_PTK6_SIGNALING	6	0.578	1.178	0.294	0.533	1.000	606
REACTOME_LYSOPHINGOLIPID_AND_LPA_RECEPTORS	6	0.574	1.178	0.269	0.533	1.000	1058
REACTOME_REGULATION_OF_P53_MRNA_TRANSLATION	9	0.516	1.178	0.293	0.532	1.000	431
REACTOME_DSCAM_INTERACTIONS	7	0.548	1.178	0.266	0.531	1.000	4122

REACTOME_NUCLEAR_ENVELOP E_NE_REASSEMBLY	68	0.312	1.175	0.177	0.537	1.000	3569
REACTOME_GENE_AND_PROTEI N_EXPRESSION_BY_JAK_STAT_SI GNALING_AFTER_INTERLEUKIN_ 12_STIMULATION	31	0.368	1.174	0.255	0.538	1.000	4097
REACTOME_CHK1_CHK2_CDS1_ MEDIATED_INACTIVATION_OF_C YCLIN_B_CDK1_COMPLEX	13	0.457	1.173	0.261	0.538	1.000	3550
REACTOME_RUNX3_REGULATES _YAP1_MEDIATED_TRANSCRIPTI ON	8	0.517	1.173	0.275	0.539	1.000	1386
REACTOME_MET_ACTIVATES_RA S_SIGNALING	9	0.508	1.171	0.281	0.541	1.000	4574
REACTOME_PERK_REGULATES_ GENE_EXPRESSION	31	0.364	1.169	0.254	0.545	1.000	2229
REACTOME_SUMO_IS_PROTEOL YTICALLY_PROCESSED	6	0.561	1.168	0.306	0.546	1.000	4031
REACTOME_P75NTR_RECRUITS_ SIGNALLING_COMPLEXES	12	0.454	1.168	0.258	0.545	1.000	1569
REACTOME_ACTIVATION_OF_M ATRIX_METALLOPROTEINASES	14	0.451	1.168	0.268	0.544	1.000	1119
REACTOME_NF_KB_IS_ACTIVATE D_AND_SIGNALS_SURVIVAL	12	0.467	1.167	0.285	0.546	1.000	1569
REACTOME_PROTEIN_FOLDING	75	0.309	1.166	0.198	0.547	1.000	2421
REACTOME_SIGNALING_BY_WN T_IN_CANCER	30	0.371	1.163	0.243	0.553	1.000	3626
REACTOME_ATTACHMENT_OF_ GPI_ANCHOR_TO_UPAR	7	0.547	1.162	0.287	0.553	1.000	837
REACTOME_FGFR2_LIGAND_BIN DING_AND_ACTIVATION	5	0.598	1.161	0.306	0.554	1.000	1506
REACTOME_ACTIVATED_NTRK3_ SIGNALS_THROUGH_RAS	7	0.543	1.160	0.268	0.555	1.000	4574
REACTOME_ARYL_HYDROCARBO N_RECEPTOR_SIGNALLING	6	0.556	1.159	0.291	0.556	1.000	1690
REACTOME_ESTROGEN_STIMUL ATED_SIGNALING_THROUGH_PR KCZ	6	0.569	1.159	0.300	0.556	1.000	4234
REACTOME_TRANSPORT_OF_VIT AMINS_NUCLEOSIDES_AND_REL ATED_MOLECULES	28	0.378	1.159	0.249	0.555	1.000	1623
REACTOME_CARGO_RECOGNITI ON_FOR_CLATHRIN_MEDIATED_ ENDOCYTOSIS	78	0.303	1.159	0.194	0.554	1.000	3583
REACTOME_SIGNALING_BY_NTR K3_TRKC_	15	0.437	1.158	0.280	0.554	1.000	1901
REACTOME_SIGNALING_BY_TGF _BETA_RECEPTOR_COMPLEX	72	0.309	1.157	0.211	0.555	1.000	3642
REACTOME_SUPPRESSION_OF_A POPTOSIS	6	0.569	1.156	0.310	0.558	1.000	4771
REACTOME_THROMBIN_SIGNAL LING_THROUGH_PROTEINASE_A CTIVATED_RECEPTORS_PARS_	19	0.415	1.152	0.277	0.566	1.000	272

REACTOME_GLUCOCORTICOID_BIOSYNTHESIS	2	0.756	1.148	0.319	0.574	1.000	2234
REACTOME_MUCOPOLYSACCHARIDOSES	11	0.463	1.147	0.294	0.575	1.000	1984
REACTOME_DOWNREGULATION_OF_ERBB2_ERBB3_SIGNALING	11	0.463	1.147	0.291	0.574	1.000	3779
REACTOME_RHO_GTPASES_ACTIVATION_KTN1	11	0.469	1.146	0.284	0.575	1.000	3390
REACTOME_INTERLEUKIN_12_SIGNALING	36	0.347	1.146	0.242	0.574	1.000	4097
REACTOME_SEMA4D_INDUCED_CELL_MIGRATION_AND_GROWTH_CONE_COLLAPSE	19	0.400	1.141	0.293	0.585	1.000	3949
REACTOME_PI3K_EVENTS_IN_ERBB4_SIGNALING	5	0.588	1.138	0.349	0.589	1.000	606
REACTOME_PHOSPHOLIPASE_C_MEDIATED_CASCADE_FGFR4	5	0.592	1.138	0.331	0.590	1.000	1020
REACTOME_MODULATION_BY_MTB_OF_HOST_IMMUNE_SYSTEM	6	0.563	1.136	0.338	0.593	1.000	5168
REACTOME_2_LTR_CIRCLE_FORMATION	7	0.530	1.136	0.327	0.592	1.000	4837
REACTOME_PI_3K_CASCADE_FGFR4	9	0.496	1.135	0.325	0.593	1.000	1020
REACTOME_SIGNALING_BY_NOTCH2	28	0.368	1.134	0.290	0.592	1.000	1569
REACTOME_PI3K_EVENTS_IN_ERBB2_SIGNALING	8	0.501	1.133	0.301	0.594	1.000	606
REACTOME_GOLGI_CISTERNAE_PERICENTRIOLAR_STACK_REORGANIZATION	14	0.446	1.133	0.286	0.593	1.000	4246
REACTOME_SIGNALING_BY_ERBB2	41	0.340	1.133	0.260	0.592	1.000	2100
REACTOME_SMAD2_SMAD3_SMAD4_HETEROTRIMER_REGULATES_TRANSCRIPTION	31	0.355	1.133	0.272	0.592	1.000	1569
REACTOME_TRANSPORT_OF_FATTY_ACIDS	2	0.759	1.129	0.330	0.598	1.000	257
REACTOME_FGFR1B_LIGAND_BINDING_AND_ACTIVATION	2	0.766	1.128	0.341	0.599	1.000	720
REACTOME_FGFR2C_LIGAND_BINDING_AND_ACTIVATION	2	0.757	1.127	0.326	0.601	1.000	1020
REACTOME_BIOSYNTHESIS_OF_MARESINS	2	0.750	1.124	0.325	0.607	1.000	3178
REACTOME_FGFR1_LIGAND_BINDING_AND_ACTIVATION	3	0.669	1.124	0.371	0.606	1.000	720
REACTOME_TFAP2_AP_2_FAMILY_REGULATES_TRANSCRIPTION_OF_CELL_CYCLE_FACTORS	5	0.571	1.123	0.364	0.607	1.000	1059
REACTOME_ACTIVATION_OF_RAC1	10	0.477	1.123	0.333	0.607	1.000	3874
REACTOME_PHOSPHOLIPASE_C_MEDIATED_CASCADE_FGFR2	4	0.625	1.121	0.352	0.609	1.000	1020

REACTOME_PROTEIN_REPAIR	6	0.560	1.119	0.368	0.613	1.000	5417
REACTOME_CIRCADIAN_CLOCK	67	0.300	1.119	0.260	0.613	1.000	1886
REACTOME_SIGNALING_BY_TYROSINE_1_INSULIN_LIKE_GROWTH_FACTOR_1_RECEPTOR_IGF1R	31	0.348	1.118	0.300	0.614	1.000	1544
REACTOME_INTERLEUKIN_9_SIGNALING	5	0.586	1.117	0.357	0.615	1.000	3707
REACTOME_P2Y_RECEPTORS	3	0.657	1.117	0.367	0.615	1.000	456
REACTOME_ACTIVATION_OF_BH3_ONLY_PROTEINS	29	0.355	1.114	0.336	0.621	1.000	1715
REACTOME_RUNX2_REGULATES_OSTEOBLAST_DIFFERENTIATION	18	0.399	1.113	0.309	0.621	1.000	1908
REACTOME_DOWNSTREAM_SIGNALING_EVENTS_OF_B_CELL_RECEPTOR_BCR	76	0.295	1.113	0.275	0.620	1.000	4312
REACTOME_STAT5_ACTIVATION	6	0.546	1.111	0.357	0.623	1.000	2908
REACTOME_BETA_OXIDATION_OF_HEXANOYL_COA_TO_BUTANOYL_COA	5	0.570	1.110	0.373	0.625	1.000	4043
REACTOME_ATF4_ACTIVATES_GENES_IN_RESPONSE_TO_ENDOPLASMIC_RETICULUM_STRESS	26	0.365	1.109	0.320	0.627	1.000	1951
REACTOME_NOTCH1_INTRACELLULAR_DOMAIN_REGULATES_TRANSCRIPTION	45	0.322	1.108	0.313	0.628	1.000	3349
REACTOME_INTRINSIC_PATHWAY_FOR_APOPTOSIS	51	0.313	1.106	0.289	0.631	1.000	1851
REACTOME_METABOLIC_DISORDERS_OF_BIOLOGICAL_OXIDATION_ENZYMES	21	0.376	1.106	0.323	0.630	1.000	1516
REACTOME_OTHER_INTERLEUKIN_SIGNALING	16	0.409	1.104	0.326	0.632	1.000	1545
REACTOME_REDUCTION_OF_CYTOSOLIC_CA_LEVELS	7	0.511	1.103	0.357	0.634	1.000	852
REACTOME_THE_PHOTOTRANSDUCTION_CASCADE	15	0.413	1.103	0.307	0.633	1.000	1611
REACTOME_ESTROGEN_DEPENDENT_GENE_EXPRESSION	93	0.282	1.102	0.262	0.635	1.000	2911
REACTOME_TERMINATION_OF_O_GLYCAN_BIOSYNTHESIS	8	0.499	1.100	0.365	0.637	1.000	3303
REACTOME_SIGNALING_BY_FGF_R_IN_DISEASE	48	0.312	1.100	0.318	0.637	1.000	4894
REACTOME_SPHINGOLIPID_DENOVO_BIOSYNTHESIS	35	0.337	1.098	0.332	0.640	1.000	3892
REACTOME_NEF_MEDIATED_CD4_DOWN_REGULATION	9	0.475	1.097	0.363	0.641	1.000	2954
REACTOME_SIGNALING_BY_ACTIVIN	10	0.457	1.097	0.361	0.641	1.000	1604
REACTOME_CA2_ACTIVATED_K_CHANNELS	3	0.641	1.096	0.414	0.643	1.000	2209

REACTOME_CALNEXIN_CALRETI CULIN_CYCLE	26	0.353	1.096	0.308	0.642	1.000	4705
REACTOME_GRB2_EVENTS_IN_E RBB2_SIGNALING	9	0.477	1.095	0.341	0.642	1.000	606
REACTOME_CELLULAR_SENESCE NCE	134	0.260	1.095	0.269	0.641	1.000	1815
REACTOME_ANDROGEN_BIOSYN THESIS	4	0.606	1.095	0.404	0.640	1.000	3601
REACTOME_MAP3K8_TPL2_DEP ENDENT_MAPK1_3_ACTIVATION	16	0.403	1.092	0.336	0.647	1.000	2850
REACTOME_SIGNALING_BY_ERY THROPOIETIN	21	0.380	1.088	0.345	0.653	1.000	3480
REACTOME_VITAMINS	3	0.639	1.088	0.402	0.653	1.000	1273
REACTOME_IRAK1_RECRUITS_IK K_COMPLEX	14	0.426	1.088	0.384	0.651	1.000	1722
REACTOME_ER_QUALITY_CONT ROL_COMPARTMENT_ERQC_	21	0.381	1.088	0.359	0.651	1.000	4133
REACTOME_PREGNENOLONE_BI OSYNTHESIS	9	0.480	1.087	0.385	0.652	1.000	4118
REACTOME_PEXOPHAGY	11	0.450	1.086	0.378	0.652	1.000	1569
REACTOME_INTERLEUKIN_27_SI GNALING	8	0.489	1.086	0.381	0.651	1.000	3877
REACTOME_INHIBITION_OF_DN A_RECOMBINATION_AT_TELOM ERE	30	0.339	1.085	0.321	0.653	1.000	3185
REACTOME_EPH_EPHRIN_MEDI ATED_REPULSION_OF_CELLS	42	0.322	1.085	0.347	0.652	1.000	1115
REACTOME_TRANSLATION_OF_ REPLICASE_AND_ASSEMBLY_OF_ THE_REPLICATION_TRANSCRIPTI ON_COMPLEX	13	0.430	1.084	0.385	0.654	1.000	2473
REACTOME_INTERLEUKIN_35_SI GNALLING	8	0.489	1.082	0.381	0.656	1.000	3877
REACTOME_CASPASE_ACTIVATI ON_VIA_DEPENDENCE_RECEPTO RS_IN_THE_ABSENCE_OF_LIGAN D	7	0.503	1.082	0.402	0.655	1.000	4049
REACTOME_SIGNALING_BY_TGF B_FAMILY_MEMBERS	86	0.277	1.081	0.313	0.656	1.000	1858
REACTOME_PHENYLALANINE_M ETABOLISM	4	0.595	1.081	0.423	0.655	1.000	1805
REACTOME_P75NTR_SIGNALS_V IA_NF_KB	15	0.404	1.080	0.373	0.656	1.000	1569
REACTOME_PHASE_II_CONJUGA TION_OF_COMPOUNDS	51	0.304	1.080	0.324	0.657	1.000	2923
REACTOME_STIMULI_SENSING_ CHANNELS	57	0.297	1.078	0.346	0.660	1.000	1721
REACTOME_MET_INTERACTS_W ITH_TNS_PROTEINS	4	0.595	1.078	0.398	0.659	1.000	1771
REACTOME_PI_3K_CASCADE_FG FR3	8	0.487	1.075	0.375	0.664	1.000	1136

REACTOME_ACTIVATION_OF_RAS_IN_B_CELLS	3	0.633	1.075	0.425	0.664	1.000	3953
REACTOME_DETOXIFICATION_OF_REACTIVE_OXYGEN_SPECIES	27	0.346	1.074	0.336	0.663	1.000	4653
REACTOME_RUNX3_REGULATES_P14_ARF	10	0.455	1.074	0.386	0.662	1.000	3322
REACTOME_HOST_INTERACTIONS_OF_HIV_FACTORS	123	0.259	1.074	0.320	0.662	1.000	4312
REACTOME_MITOCHONDRIAL_FATTY_ACID_BETA_OXIDATION_OF_SATURATED_FATTY_ACIDS	8	0.471	1.073	0.397	0.662	1.000	4043
REACTOME_SIGNALING_BY_KIT_IN_DISEASE	19	0.382	1.073	0.385	0.662	1.000	3953
REACTOME_SIGNALING_BY_NOTCH1_HD_DOMAIN_MUTANTS_IN_CANCER	14	0.417	1.073	0.379	0.661	1.000	1569
REACTOME_DEFENSINS	3	0.646	1.072	0.426	0.662	1.000	1036
REACTOME_PLATELET_CALCIIUM_HOMEOSTASIS	17	0.380	1.072	0.352	0.662	1.000	1975
REACTOME_LISTERIA_MONOCYTOGENES_ENTRY_INTO_HOST_CELLS	18	0.384	1.069	0.360	0.667	1.000	3779
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_THE_AP2_FAMILY_OF_TRANSCRIPTION_FACTORS	28	0.348	1.069	0.367	0.666	1.000	2775
REACTOME_INTRACELLULAR_SIGNALING_BY_SECOND_MESSENGERS	247	0.238	1.067	0.288	0.669	1.000	1351
REACTOME_METABOLISM_OF_AMINO_ACIDS_AND_DERIVATIVES	292	0.236	1.066	0.286	0.670	1.000	4025
REACTOME_VEGFR2_MEDIATED_VASCULAR_PERMEABILITY	23	0.358	1.066	0.371	0.669	1.000	3943
REACTOME_ALPHA_DEFENSINS	3	0.646	1.065	0.441	0.671	1.000	1036
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_RUNX1	162	0.249	1.064	0.320	0.671	1.000	3525
REACTOME_THE_ROLE_OF_NEF_IN_HIV_1_REPLICATION_AND_DISEASE_PATHOGENESIS	22	0.369	1.063	0.389	0.674	1.000	2954
REACTOME_INTERLEUKIN_RECEPTOR_SHC_SIGNALING	15	0.395	1.063	0.372	0.673	1.000	3707
REACTOME_BUDDING_AND_MATURATION_OF_HIV_VIRION	28	0.342	1.062	0.366	0.672	1.000	4066
REACTOME_MITOCHONDRIAL_FATTY_ACID_BETA_OXIDATION_OF_UNSATURATED_FATTY_ACIDS	5	0.541	1.062	0.410	0.671	1.000	5531
REACTOME_LYSOSOME_VESICLE_BIOGENESIS	31	0.334	1.062	0.372	0.670	1.000	2475
REACTOME_TRIF_MEDIATED_PROGRAMMED_CELL_DEATH	7	0.498	1.062	0.390	0.669	1.000	317
REACTOME_NEGATIVE_REGULATION_OF_MET_ACTIVITY	18	0.371	1.059	0.353	0.676	1.000	4574

REACTOME_G_ALPHA_Q_SIGNA LLING_EVENTS	87	0.273	1.058	0.348	0.676	1.000	1412
REACTOME_PI5P_REGULATES_T P53_ACETYLATION	9	0.458	1.057	0.413	0.677	1.000	4119
REACTOME_TRP_CHANNELS	13	0.416	1.056	0.410	0.679	1.000	2000
REACTOME_ERYTHROCYTES_TAK E_UP_OXYGEN_AND_RELEASE_C ARBON_DIOXIDE	2	0.687	1.056	0.431	0.678	1.000	1529
REACTOME_TRANSCRIPTIONAL_ REGULATION_BY_RUNX3	92	0.265	1.055	0.337	0.680	1.000	4024
REACTOME_RHO_GTPASE_CYCL E	117	0.259	1.054	0.354	0.681	1.000	1663
REACTOME_TRANSCRIPTIONAL_ ACTIVITY_OF_SMAD2_SMAD3_S MAD4_HETEROTRIMER	43	0.303	1.053	0.369	0.681	1.000	1799
REACTOME_PROSTACYCLIN_SIG NALLING_THROUGH_PROSTACY CLIN_RECEPTOR	8	0.474	1.053	0.404	0.680	1.000	2180
REACTOME_ACTIVATION_OF_KA INATE_RECEPTORS_UPON_GLUT AMATE_BINDING	15	0.400	1.052	0.382	0.681	1.000	2486
REACTOME_GLUCAGON_LIKE_P EPTIDE_1_GLP1_REGULATES_INS ULIN_SECRETION	22	0.361	1.052	0.369	0.681	1.000	2180
REACTOME_ERBB2_REGULATES_ CELL_MOTILITY	8	0.479	1.051	0.430	0.681	1.000	606
REACTOME_INSULIN_PROCESSIN G	22	0.353	1.050	0.404	0.682	1.000	3910
REACTOME_ACYL_CHAIN_REMO DELLING_OF_PG	6	0.508	1.050	0.432	0.682	1.000	231
REACTOME_AMYLOID_FIBER_FO RMATION	42	0.312	1.049	0.376	0.682	1.000	2748
REACTOME_ACTIVATED_NTRK2_ SIGNALS_THROUGH_CDK5	5	0.522	1.049	0.444	0.682	1.000	2378
REACTOME_SIGNALING_BY_THE _B_CELL_RECEPTOR_BCR_	97	0.262	1.046	0.354	0.687	1.000	4312
REACTOME_CELL_CELL_JUNCTIO N_ORGANIZATION	35	0.318	1.046	0.380	0.686	1.000	964
REACTOME_NEF_MEDIATES_DO WN_MODULATION_OF_CELL_SU RFACE_RECEPTORS_BY_RECRUIT ING_THEM_TO_CLATHRIN_ADAP TERS	19	0.373	1.045	0.392	0.687	1.000	2954
REACTOME_DEFECTIVE_GALNT3 _CAUSES_FAMILIAL_HYPERPHOS PHATEMIC_TUMORAL_CALCINO SIS_HFTC_	4	0.583	1.045	0.462	0.687	1.000	1022
REACTOME_ABACAVIR_METABO LISM	4	0.573	1.045	0.454	0.686	1.000	3240
REACTOME_INTERLEUKIN_20_F AMILY_SIGNALING	16	0.376	1.045	0.385	0.685	1.000	414
REACTOME_MTORC1_MEDIATE D_SIGNALLING	23	0.354	1.041	0.403	0.692	1.000	2367

REACTOME_E3_UBIQUITIN_LIGASES_UBIQUITINATE_TARGET_PROTEINS	45	0.297	1.039	0.371	0.695	1.000	2672
REACTOME_VASOPRESSIN_REGULATES_RENAL_WATER_HOMEOSTASIS_VIA_AQUAPORINS	21	0.358	1.039	0.400	0.694	1.000	2182
REACTOME_ADORA2B_MEDIATED_ANTI_INFLAMMATORY_CYTOKINES_PRODUCTION	37	0.311	1.039	0.404	0.693	1.000	2269
REACTOME_VXPX_CARGO_TARGETING_TO_CILIUM	17	0.378	1.038	0.411	0.695	1.000	3223
REACTOME_PHASE_1_INACTIVATION_OF_FAST_NA_CHANNELS	3	0.624	1.037	0.475	0.696	1.000	332
REACTOME_O_LINKED_GLYCOSYLATION	61	0.281	1.034	0.378	0.703	1.000	1630
REACTOME_DIGESTION_OF_DIETARY_LIPID	1	0.776	1.034	0.447	0.702	1.000	2844
REACTOME_DISEASES_ASSOCIATED_WITH_SURFACTANT_METABOLISM	1	0.784	1.032	0.454	0.705	1.000	2740
REACTOME_MECP2_REGULATES_TRANSCRIPTION_FACTORS	3	0.615	1.032	0.489	0.705	1.000	4899
REACTOME_ROBO_RECEPTORS_BIND_AKAP5	7	0.480	1.030	0.438	0.707	1.000	1610
REACTOME_REGULATION_OF_RUNX1_EXPRESSION_AND_ACTIVITY	16	0.384	1.029	0.422	0.708	1.000	1908
REACTOME_ROLE_OF_LAT2_NATAL_LAB_ON_CALCIIUM_MOBILIZATION	13	0.411	1.029	0.433	0.708	1.000	816
REACTOME_RHO_GTPASES_ACTIVATE_FORMINS	129	0.248	1.029	0.396	0.707	1.000	2493
REACTOME_DOPAMINE_NEUROTRANSMITTER_RELEASE_CYCLE	14	0.393	1.027	0.424	0.709	1.000	3096
REACTOME_IRS_MEDIATED_SIGNALING	29	0.324	1.022	0.408	0.720	1.000	1544
REACTOME_ARMS_MEDIATED_ACTIVATION	5	0.515	1.022	0.453	0.719	1.000	4322
REACTOME_CYTOCHROME_C_MEDIATED_APOPTOTIC_RESPONSE	13	0.400	1.021	0.415	0.721	1.000	1851
REACTOME_CELLULAR_RESPONSE_TO_HEAT_STRESS	93	0.259	1.021	0.401	0.720	1.000	3960
REACTOME_ACTIVATION_OF_NIMA_KINASES_NEK9_NEK6_NEK7	7	0.474	1.021	0.451	0.719	1.000	3550
REACTOME_TERMINAL_PATHWAY_OF_COMPLEMENT	2	0.663	1.019	0.483	0.721	1.000	1785
REACTOME_G_ALPHA_12_13_SIGNALING_EVENTS	60	0.278	1.019	0.413	0.720	1.000	2238
REACTOME_TETRAHYDROBIOTIN_BH4_SYNTHESIS_RECYCLING_SALVAGE_AND_REGULATION	9	0.448	1.018	0.442	0.723	1.000	2078

REACTOME_PHOSPHATE_BOND_HYDROLYSIS_BY_NTPDASE_PROTEINS	6	0.480	1.016	0.448	0.725	1.000	1855
REACTOME_DOWNSTREAM_SIGNAL_TRANSDUCTION	28	0.329	1.016	0.438	0.724	1.000	4150
REACTOME_SIGNALING_BY_BRAF_AND_RAF_FUSIONS	57	0.279	1.016	0.409	0.723	1.000	897
REACTOME_C_TYPE_LECTIN_RECEPTORS_CLRS	112	0.250	1.014	0.414	0.726	1.000	3985
REACTOME_WAX_AND_PLASMA_LOGEN_BIOSYNTHESIS	4	0.547	1.012	0.492	0.729	1.000	793
REACTOME_GLYCOLYSIS	62	0.276	1.012	0.412	0.729	1.000	2666
REACTOME_GLYCOGEN_BREAKDOWN_GLYCOGENOLYSIS	15	0.384	1.012	0.417	0.729	1.000	407
REACTOME_G_BETA_GAMMA_SIGNALING_THROUGH_CDC42	9	0.441	1.011	0.434	0.728	1.000	2180
REACTOME_SIGNALING_BY_NOTCH1_PEST_DOMAIN_MUTANTS_IN_CANCER	56	0.278	1.011	0.430	0.728	1.000	3349
REACTOME_RAS_PROCESSING	23	0.339	1.011	0.435	0.728	1.000	4173
REACTOME_LRR_FLII_INTERACTING_PROTEIN_1_LRRFIP1_ACTIVATES_TYPE_I_IFN_PRODUCTION	5	0.512	1.010	0.473	0.727	1.000	5361
REACTOME_GABA_B_RECEPTOR_ACTIVATION	19	0.361	1.010	0.451	0.726	1.000	2182
REACTOME_CARGO_TRAFFICKING_TO_THE_PERICILIARY_MEMBRANE	43	0.290	1.007	0.451	0.734	1.000	3223
REACTOME_RNA_POLYMERASE_III_TRANSCRIPTION_INITIATION_FROM_TYPE_3_PROMOTER	28	0.321	1.006	0.437	0.733	1.000	1350
REACTOME_PROSTANOID_LIGAND_RECEPTORS	1	0.755	1.005	0.486	0.736	1.000	3119
REACTOME_GLUCAGON_TYPE_LIGAND_RECEPTORS	11	0.399	1.002	0.471	0.740	1.000	2180
REACTOME_HCMV_EARLY_EVENTS	72	0.271	1.002	0.457	0.740	1.000	2166
REACTOME_SIGNALING_BY_NODAL	12	0.408	1.002	0.466	0.739	1.000	1248
REACTOME_CONSTITUTIVE_SIGNALING_BY_LIGAND_RESPONSIVE_EGFR_CANCER_VARIANTS	16	0.368	1.001	0.453	0.739	1.000	2078
REACTOME_PHOSPHATE_BOND_HYDROLYSIS_BY_NUDT_PROTEINS	7	0.463	1.000	0.472	0.740	1.000	361
REACTOME_GLYCOGEN_STORAGE_DISEASES	12	0.411	1.000	0.470	0.740	1.000	1569
REACTOME_SIGNALING_BY_ERBB2_IN_CANCER	18	0.367	1.000	0.454	0.740	1.000	2078
REACTOME_MITOPHAGY	28	0.326	0.999	0.483	0.741	1.000	3779
REACTOME_PEPTIDE_HORMONE_METABOLISM	44	0.288	0.997	0.445	0.744	1.000	3910

REACTOME_G_BETA_GAMMA_S IGNALLING_THROUGH_PI3KGA MMA	12	0.406	0.996	0.467	0.745	1.000	3691
REACTOME_TRAFFICKING_OF_M YRISTOYLATED_PROTEINS_TO_T HE_CILIUM	4	0.556	0.995	0.511	0.746	1.000	2792
REACTOME_ASPARTATE_AND_A SPARAGINE_METABOLISM	6	0.482	0.995	0.481	0.745	1.000	104
REACTOME_SYNTHESIS_OF_IP2_ IP_AND_INS_IN_THE_CYTOSOL	11	0.414	0.995	0.438	0.745	1.000	3126
REACTOME_SIGNALING_BY_SCF _KIT	38	0.299	0.993	0.454	0.747	1.000	3953
REACTOME_FCERI_MEDIATED_N F_KB_ACTIVATION	73	0.264	0.992	0.461	0.749	1.000	4312
REACTOME_PROTEIN_UBIQUITI NATION	65	0.269	0.991	0.470	0.749	1.000	4677
REACTOME_RUNX1_REGULATES _TRANSCRIPTION_OF_GENES_IN VOLVED_IN_INTERLEUKIN_SIGN ALING	3	0.594	0.991	0.530	0.749	1.000	1908
REACTOME_PROTON_COUPLED_ MONOCARBOXYLATE_TRANSPO RT	3	0.586	0.990	0.534	0.750	1.000	4862
REACTOME_INTERACTIONS_OF_ VPR_WITH_HOST_CELLULAR_PR OTEINS	37	0.298	0.987	0.490	0.757	1.000	2493
REACTOME_SIGNALING_BY_FGF R2_III_A_TM	16	0.363	0.984	0.480	0.761	1.000	2357
REACTOME_PTK6_REGULATES_P ROTEINS_INVOLVED_IN_RNA_PR OCCESSING	4	0.535	0.984	0.518	0.760	1.000	5907
REACTOME_TGF_BETA_RECEPTO R_SIGNALING_IN_EMT_EPITHELI AL_TO_MESENCHYMAL_TRANSIT ION_	16	0.370	0.984	0.496	0.760	1.000	4568
REACTOME_HIV_INFECTION	218	0.220	0.984	0.504	0.759	1.000	4215
REACTOME_GLUTATHIONE_CON JUGATION	22	0.334	0.982	0.480	0.762	1.000	2897
REACTOME_NOD1_2_SIGNALIN G_PATHWAY	35	0.300	0.982	0.488	0.761	1.000	1873
REACTOME_TRANSPORT_OF_NU CLEOSIDES_AND_FREE_PURINE_ AND_PYRIMIDINE_BASES_ACRO SS_THE_PLASMA_MEMBRANE	9	0.420	0.982	0.509	0.761	1.000	1623
REACTOME_FACTORS_INVOLVE D_IN_MEGAKARYOCYTE_DEVEL OPMENT_AND_PLATELET_PROD UCTION	117	0.237	0.975	0.524	0.774	1.000	2543
REACTOME_CHOLINE_CATABOLI SM	4	0.537	0.975	0.535	0.774	1.000	588
REACTOME_HDMS_DEMETHYLA TE_HISTONES	21	0.341	0.974	0.508	0.775	1.000	3618

REACTOME_SOS_MEDIATED_SIG NALLING	7	0.456	0.970	0.513	0.782	1.000	5166
REACTOME_REGULATION_OF_H SF1_MEDIATED_HEAT_SHOCK_R ESPONSE	76	0.254	0.970	0.508	0.782	1.000	3960
REACTOME_INACTIVATION_OF_ CDC42_AND_RAC1	6	0.472	0.969	0.496	0.782	1.000	2378
REACTOME_TRANSCRIPTIONAL_ REGULATION_BY_RUNX2	101	0.242	0.968	0.505	0.783	1.000	4312
REACTOME_NRAGE_SIGNALS_D EATH_THROUGH_JNK	52	0.273	0.968	0.523	0.784	1.000	977
REACTOME_SULFIDE_OXIDATIO N_TO_SULFATE	6	0.473	0.967	0.496	0.784	1.000	1093
REACTOME_INTERFERON_SIGNA LING	142	0.231	0.967	0.559	0.783	1.000	2948
REACTOME_PROCESSING_AND_ ACTIVATION_OF_SUMO	10	0.400	0.966	0.494	0.785	1.000	2915
REACTOME_NEUROTRANSMITTE R_RELEASE_CYCLE	25	0.321	0.965	0.494	0.785	1.000	3186
REACTOME_HCMV_INFECTION	96	0.241	0.964	0.550	0.786	1.000	2703
REACTOME_AQUAPORIN_MEDIA TED_TRANSPORT	24	0.321	0.963	0.518	0.786	1.000	2333
REACTOME_ABORTIVE_ELONGA TION_OF_HIV_1_TRANSCRIPT_I N_THE_ABSENCE_OF_TAT	23	0.328	0.962	0.527	0.788	1.000	2357
REACTOME_DISEASES_ASSOCIAT ED_WITH_GLYCOSYLATION_PRE CURSOR_BIOSYNTHESIS	18	0.342	0.961	0.508	0.789	1.000	2566
REACTOME_INWARDLY_RECTIFY ING_K_CHANNELS	13	0.378	0.960	0.518	0.792	1.000	782
REACTOME_INLB_MEDIATED_EN TRY_OF_LISTERIA_MONOCYTOG ENES_INTO_HOST_CELL	13	0.377	0.959	0.512	0.791	1.000	1771
REACTOME_NEDDYLATION	208	0.214	0.953	0.571	0.805	1.000	3531
REACTOME_REMOVAL_OF_AMI NOTERMINAL_PROPEPTIDES_FR OM_GAMMA_CARBOXYLATED_P ROTEINS	7	0.436	0.952	0.521	0.805	1.000	1464
REACTOME_DOWNSTREAM_SIG NALING_OF_ACTIVATED_FGFR2	15	0.355	0.951	0.532	0.806	1.000	1020
REACTOME_BETA_OXIDATION_ OF_BUTANOYL_COA_TO_ACETYL _COA	3	0.558	0.951	0.587	0.807	1.000	2693
REACTOME_GAMMA_CARBOXYL ATION_TRANSPORT_AND_AMIN O_TERMINAL_CLEAVAGE_OF_PR OTEINS	8	0.434	0.951	0.515	0.806	1.000	1464
REACTOME_REGULATION_OF_KI T_SIGNALING	15	0.370	0.951	0.519	0.805	1.000	1443
REACTOME_FGFR1C_LIGAND_BI NDING_AND_ACTIVATION	2	0.624	0.949	0.598	0.807	1.000	4782

REACTOME_TRANSCRIPTIONAL_REGULATION_BY_TP53	343	0.204	0.946	0.620	0.812	1.000	2789
REACTOME_SIGNAL_REGULATORY_PROTEIN_FAMILY_INTERACTIONS	10	0.396	0.945	0.559	0.814	1.000	5160
REACTOME_DOWNSTREAM_SIGNALING_OF_ACTIVATED_FGFR4	16	0.340	0.944	0.541	0.814	1.000	1020
REACTOME_NUCLEOTIDE_LIKE_PURINERGIC_RECEPTORS	5	0.473	0.944	0.542	0.814	1.000	2269
REACTOME_FGFR1_MUTANT_RECEPTOR_ACTIVATION	22	0.327	0.941	0.559	0.819	1.000	4894
REACTOME_REGULATION_OF_RAS_BY_GAPS	64	0.258	0.941	0.566	0.818	1.000	4312
REACTOME_MET_ACTIVATES_PTEN1	3	0.563	0.941	0.590	0.817	1.000	1771
REACTOME_CYP2E1_REACTIONS	3	0.567	0.939	0.610	0.819	1.000	1194
REACTOME_SLC_MEDIATED_TRANSMEMBRANE_TRANSPORT	132	0.229	0.938	0.611	0.821	1.000	2055
REACTOME_DECTIN_1_MEDIATED_NONCANONICAL_NF_KB_SIGNALING	58	0.257	0.934	0.579	0.828	1.000	4312
REACTOME_HEDGEHOG_OFF_STATE	97	0.236	0.934	0.596	0.828	1.000	3985
REACTOME_CELL_DEATH_SIGNALING_VIA_NRAGE_NRIF_AND_NF_KB	69	0.248	0.931	0.599	0.833	1.000	2765
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_G1_CELL_CYCLE_ARREST	13	0.357	0.931	0.564	0.832	1.000	1059
REACTOME_OPSINS	1	0.701	0.930	0.618	0.833	1.000	3803
REACTOME_FOXO_MEDIATED_TRANSCRIPTION_OF_OXIDATIVE_STRESS_METABOLIC_AND_NEURONAL_GENES	20	0.320	0.928	0.555	0.837	1.000	3687
REACTOME_INTERLEUKIN_1_FAMILY_SIGNALING	108	0.227	0.928	0.600	0.836	1.000	3985
REACTOME_DIGESTION	2	0.613	0.927	0.597	0.837	1.000	2844
REACTOME_CD22_MEDIATED_B_CELL_REGULATION	2	0.613	0.925	0.619	0.839	1.000	4915
REACTOME_RAB_REGULATION_OF_TRAFFICKING	111	0.226	0.924	0.625	0.841	1.000	3691
REACTOME_DISEASES_OF_IMMUNE_SYSTEM	16	0.339	0.923	0.569	0.842	1.000	317
REACTOME_N_GLYCAN_TRIMMING_IN_THE_ER_AND_CALNEXIN_CALRETICULIN_CYCLE	35	0.281	0.921	0.559	0.845	1.000	4151
REACTOME_CRMP5_IN_SEMA3A_SIGNALING	12	0.367	0.921	0.566	0.845	1.000	1589
REACTOME_BETA_OXIDATION_OF_OCTANOYL_COA_TO_HEXANOYL_COA	5	0.479	0.920	0.595	0.847	1.000	4043

REACTOME_SIGNALING_BY_WN T	221	0.206	0.918	0.668	0.850	1.000	3642
REACTOME_G_ALPHA_S_SIGNAL LING_EVENTS	51	0.260	0.917	0.609	0.849	1.000	3387
REACTOME_INTERLEUKIN_37_SI GNALING	14	0.349	0.916	0.606	0.850	1.000	3101
REACTOME_HIV_ELONGATION_ ARREST_AND_RECOVERY	32	0.289	0.916	0.596	0.849	1.000	2789
REACTOME_ANTI_INFLAMMATO RY_RESPONSE_FAVOURING_LEIS HMANIA_PARASITE_INFECTION	58	0.251	0.915	0.595	0.850	1.000	2269
REACTOME_BETA_OXIDATION_ OF_LAUROYL_COA_TO_DECANO YL_COA_COA	4	0.503	0.915	0.596	0.849	1.000	4043
REACTOME_DEGRADATION_OF_ GLI1_BY_THE_PROTEASOME	56	0.257	0.915	0.622	0.848	1.000	4312
REACTOME_NUCLEOTIDE_BINDI NG_DOMAIN_LEUCINE_RICH_RE PEAT_CONTAINING_RECEPTOR_ NLR_SIGNALING_PATHWAYS	47	0.264	0.915	0.606	0.847	1.000	2186
REACTOME_SIGNALING_BY_FGF R2_IN_DISEASE	28	0.300	0.915	0.601	0.847	1.000	2357
REACTOME_FGFR2B_LIGAND_BI NDING_AND_ACTIVATION	3	0.550	0.915	0.627	0.846	1.000	1506
REACTOME_CASPASE_ACTIVATI ON_VIA_EXTRINSIC_APOPTOTIC _SIGNALLING_PATHWAY	21	0.312	0.912	0.599	0.850	1.000	400
REACTOME_SODIUM_PROTON_ EXCHANGERS	5	0.462	0.911	0.583	0.851	1.000	1807
REACTOME_GABA_RECEPTOR_A CTIVATION	24	0.300	0.911	0.632	0.851	1.000	2182
REACTOME_CYTOSOLIC_SULFON ATION_OF_SMALL_MOLECULES	15	0.338	0.910	0.545	0.851	1.000	1170
REACTOME_PINK1_PRKN_MEDI ATED_MITOPHAGY	21	0.313	0.910	0.586	0.850	1.000	2103
REACTOME_REGULATION_OF_R UNX3_EXPRESSION_AND_ACTIVI TY	55	0.250	0.910	0.637	0.850	1.000	5361
REACTOME_JNK_C_JUN_KINASE S_PHOSPHORYLATION_AND_ACT IVATION_MEDIATED_BY_ACTIVA TED_HUMAN_TAK1	21	0.306	0.907	0.577	0.855	1.000	2841
REACTOME_GAP_JUNCTION_DE GRADATION	11	0.372	0.907	0.581	0.854	1.000	3583
REACTOME_TRYPTOPHAN_CATA BOLISM	8	0.407	0.905	0.581	0.856	1.000	1870
REACTOME_ROLE_OF_ABL_IN_R OBO_SLIT_SIGNALING	7	0.414	0.902	0.586	0.861	1.000	2310
REACTOME_METABOLISM_OF_C OFACTORS	18	0.322	0.902	0.583	0.861	1.000	2338
REACTOME_APC_C_CDC20_MED IATED_DEGRADATION_OF_CYCLI N_B	24	0.301	0.900	0.601	0.864	1.000	3779

REACTOME_THROMBOXANE_SIGNALING_THROUGH_TP_RECEPTOR	11	0.367	0.900	0.605	0.863	1.000	2180
REACTOME_SARS_COV_1_INFECTION	46	0.258	0.899	0.646	0.864	1.000	2628
REACTOME_HUR_ELAVL1_BINDS_AND_STABILIZES_MRNA	8	0.401	0.898	0.601	0.866	1.000	619
REACTOME_CD28_CO_STIMULATION	28	0.293	0.897	0.619	0.867	1.000	2415
REACTOME_NOTCH3_ACTIVATION_AND_TRANSMISSION_OF_SIGNAL_TO_THE_NUCLEUS	21	0.305	0.893	0.622	0.874	1.000	1569
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_DIFFERENTIATION_OF_HSCS	74	0.235	0.892	0.670	0.874	1.000	4339
REACTOME_FCGR_ACTIVATION	5	0.467	0.891	0.616	0.875	1.000	576
REACTOME_DEGRADATION_OF_BETA_CATENIN_BY_THE_DESTRUCTION_COMPLEX	80	0.230	0.890	0.666	0.876	1.000	4312
REACTOME_SUMOYLATION_OF_TRANSCRIPTION_COFACTORS	43	0.254	0.888	0.648	0.879	1.000	2977
REACTOME_METHIONINE_SALVAGE_PATHWAY	6	0.429	0.887	0.611	0.880	1.000	2706
REACTOME_FORMATION_OF_ATP_BY_CHEMIOSMOTIC_COUPLING	16	0.326	0.886	0.631	0.881	1.000	5312
REACTOME_SULFUR_AMINO_ACID_METABOLISM	22	0.300	0.884	0.626	0.886	1.000	1967
REACTOME_APOPTOSIS_INDUCED_DNA_FRAGMENTATION	9	0.384	0.882	0.615	0.888	1.000	2155
REACTOME_MYOCLONIC_EPILEPSY_OF_LAFORA	7	0.406	0.880	0.627	0.892	1.000	1569
REACTOME_TAK1_ACTIVATES_NFKB_BY_PHOSPHORYLATION_AND_ACTIVATION_OF_IKKS_COMPLEX	29	0.281	0.879	0.638	0.893	1.000	2936
REACTOME_ACYL_CHAIN_REMODELING_OF_PI	6	0.419	0.874	0.639	0.902	1.000	231
REACTOME_SEMA3A_PLEXIN_REPULSION_SIGNALING_BY_INHIBITING_INTEGRIN_ADHESION	12	0.346	0.874	0.639	0.901	1.000	2938
REACTOME_NOREPINEPHRINE_NEUROTRANSMITTER_RELEASE_CYCLE	10	0.357	0.873	0.640	0.901	1.000	1496
REACTOME_PP2A_MEDIATED_DEPHOSPHORYLATION_OF_KEY_METABOLIC_FACTORS	6	0.421	0.872	0.651	0.903	1.000	2088
REACTOME_SYNTHESIS_OF_PIP3_AT_THE_PLASMA_MEMBRANE	45	0.251	0.870	0.691	0.905	1.000	3736
REACTOME_METABOLISM_OF_INGESTED_SEMET_SEC_MESEC_INTO_H2SE	4	0.472	0.870	0.635	0.904	1.000	312

REACTOME_VLDL_CLEARANCE	3	0.517	0.870	0.646	0.903	1.000	406
REACTOME_MAPK6_MAPK4_SIG NALING	82	0.229	0.869	0.700	0.903	1.000	3985
REACTOME_MRNA_CAPPING	28	0.285	0.869	0.654	0.903	1.000	2549
REACTOME_SUMO_IS_TRANSFE RRED_FROM_E1_TO_E2_UBE2I_ UBC9_	7	0.403	0.869	0.644	0.902	1.000	4031
REACTOME_FOLDING_OF_ACTIN _BY_CCT_TRIC	9	0.380	0.868	0.626	0.903	1.000	3065
REACTOME_APC_CDC20_MEDIA TED_DEGRADATION_OF_NEK2A	26	0.283	0.866	0.660	0.905	1.000	3290
REACTOME_ALTERNATIVE_COM PLEMENT_ACTIVATION	4	0.471	0.866	0.642	0.904	1.000	2284
REACTOME_INTERLEUKIN_1_SIG NALING	92	0.222	0.866	0.740	0.903	1.000	4312
REACTOME_NRCAM_INTERACTI ONS	6	0.422	0.866	0.652	0.902	1.000	2486
REACTOME_PHASE_2_PLATEAU_ PHASE	9	0.375	0.864	0.611	0.904	1.000	2515
REACTOME_RUNX1_REGULATES _EXPRESSION_OF_COMPONENT S_OF_TIGHT_JUNCTIONS	4	0.474	0.864	0.632	0.903	1.000	3465
REACTOME_DOWNSTREAM_SIG NALING_OF_ACTIVATED_FGFR3	15	0.326	0.864	0.673	0.902	1.000	1136
REACTOME_TIGHT_JUNCTION_I NTERACTIONS	17	0.320	0.862	0.655	0.904	1.000	1401
REACTOME_TIE2_SIGNALING	13	0.343	0.861	0.659	0.905	1.000	816
REACTOME_NOTCH_HLH_TRANS CRIPTION_PATHWAY	27	0.280	0.859	0.663	0.908	1.000	3349
REACTOME_APOPTOTIC_FACTO R_MEDIATED_RESPONSE	18	0.303	0.859	0.670	0.908	1.000	1851
REACTOME_SYNTHESIS_OF_GLY COSYLPHOSPHATIDYLINOSITOL_ GPI_	16	0.314	0.858	0.634	0.908	1.000	2009
REACTOME_FRS_MEDIATED_FGF R2_SIGNALING	11	0.346	0.856	0.644	0.912	1.000	1020
REACTOME_SIGNALING_BY_NOT CH	166	0.198	0.853	0.843	0.917	1.000	4196
REACTOME_SODIUM_COUPLED_ PHOSPHATE_COTRANSPORTERS	2	0.572	0.852	0.746	0.917	1.000	1486
REACTOME_DISEASES_OF_PROG RAMMED_CELL_DEATH	23	0.287	0.852	0.666	0.916	1.000	2215
REACTOME_REGULATION_OF_F OXO_TRANSCRIPTIONAL_ACTIVI TY_BY_ACETYLATION	10	0.361	0.850	0.660	0.919	1.000	2775
REACTOME_GLUTATHIONE_SYN THESIS_AND_RECYCLING	10	0.356	0.849	0.647	0.919	1.000	1552
REACTOME_CONSTITUTIVE_SIG NALING_BY_OVEREXPRESSED_E RBB2	11	0.355	0.848	0.663	0.920	1.000	4750

REACTOME_ACETYLCHOLINE_NEUROTRANSMITTER_RELEASE_CYCLE	10	0.357	0.846	0.651	0.923	1.000	1496
REACTOME_GLUCOSE_METABOLISM	77	0.226	0.846	0.755	0.922	1.000	2706
REACTOME_FORMATION_OF_THE_EARLY_ELONGATION_COMPLEX	32	0.258	0.843	0.725	0.927	1.000	2549
REACTOME_HIV_LIFE_CYCLE	144	0.200	0.842	0.833	0.927	1.000	3118
REACTOME_TFAP2_AP_2_FAMILY_REGULATES_TRANSCRIPTION_OF_GROWTH_FACTORS_AND_THEIR_RECEPTORS	7	0.392	0.841	0.656	0.928	1.000	1649
REACTOME_CLEC7A_DECTIN_1_SIGNALING	94	0.213	0.841	0.790	0.928	1.000	4312
REACTOME_CONSTITUTIVE_SIGNALING_BY_AKT1_E17K_IN_CANCER	26	0.273	0.838	0.699	0.931	1.000	2117
REACTOME_RAB_GEF_EXCHANGE_GTP_FOR_GDP_ON_RABS	82	0.216	0.837	0.768	0.933	1.000	3691
REACTOME_STABILIZATION_OF_P53	55	0.231	0.836	0.741	0.933	1.000	4568
REACTOME_SIGNALING_BY_HEDGEHOG	123	0.204	0.836	0.841	0.932	1.000	3985
REACTOME_ORGANIC_CATION_ANION_ZWITTERION_TRANSPORT	6	0.401	0.836	0.663	0.931	1.000	155
REACTOME_DEGRADATION_OF_CYSTEINE_AND_HOMOCYSTEINE	12	0.336	0.836	0.677	0.930	1.000	1093
REACTOME_RNA_POLYMERASE_III_TRANSCRIPTION_INITIATION_FROM_TYPE_1_PROMOTER	28	0.271	0.836	0.724	0.930	1.000	803
REACTOME_AUF1_HNRNP_D0_BINDS_AND_DESTABILIZES_MRNA	53	0.233	0.834	0.763	0.931	1.000	4312
REACTOME_RUNX1_REGULATES_TRANSCRIPTION_OF_GENES_INVOLVED_IN_WNT_SIGNALING	4	0.453	0.833	0.682	0.931	1.000	1908
REACTOME_TRAF6_MEDIATED_IRF7_ACTIVATION_IN_TLR7_8_OR_9_SIGNALING	11	0.336	0.831	0.693	0.934	1.000	3779
REACTOME_HIV_TRANSCRIPTION_ELONGATION	41	0.247	0.830	0.754	0.936	1.000	2789
REACTOME_MISCELLANEOUS_TRANSPORT_AND_BINDING_EVENTS	21	0.281	0.830	0.707	0.935	1.000	2392
REACTOME_ORGANIC_CATION_TRANSPORT	6	0.401	0.828	0.690	0.937	1.000	155
REACTOME_UCH_PROTEINASES	83	0.212	0.828	0.820	0.937	1.000	4908
REACTOME_DEFECTIVE_CFTR_CAUSES_CYSTIC_FIBROSIS	58	0.229	0.825	0.775	0.940	1.000	4312
REACTOME_FRS_MEDIATED_FGF_R4_SIGNALING	12	0.324	0.823	0.675	0.943	1.000	1020

REACTOME_BETA_CATENIN_PHOSPHORYLATION_CASCADE	16	0.300	0.822	0.716	0.944	1.000	3597
REACTOME_SIGNALING_BY_MEMBRANE_TETHERED_FUSIONS_OF_PDGFR_A_OR_PDGFR_B	3	0.480	0.820	0.709	0.946	1.000	484
REACTOME_ACTIVATION_OF_PPARGC1A_PGC_1ALPHA_BY_PHOSPHORYLATION	9	0.360	0.820	0.705	0.945	1.000	568
REACTOME_ENDOSOMAL_SORTING_COMPLEX_REQUIRED_FOR_TRANSPORT_ESCRT	31	0.260	0.820	0.760	0.944	1.000	2703
REACTOME_METABOLISM_OF_POLYAMINES	57	0.225	0.819	0.778	0.944	1.000	4312
REACTOME_MTOR_SIGNALLING	39	0.244	0.819	0.776	0.944	1.000	2367
REACTOME_TRIGLYCERIDE_BIOSYNTHESIS	10	0.345	0.818	0.727	0.944	1.000	280
REACTOME_REACTIONS_SPECIFIC_TO_THE_COMPLEX_N_GLYCAN_SYNTHESIS_PATHWAY	5	0.418	0.817	0.694	0.945	1.000	2451
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_DEATH_RECEPTORS_AND_LIGANDS	10	0.348	0.815	0.702	0.946	1.000	1526
REACTOME_PHOSPHORYLATION_OF_THE_APC_COMPLEX	20	0.280	0.814	0.718	0.947	1.000	3550
REACTOME_REGULATION_OF_PITEN_GENE_TRANSCRIPTION	60	0.223	0.814	0.802	0.947	1.000	1263
REACTOME_FGFR3_LIGAND_BINDING_AND_ACTIVATION	4	0.449	0.813	0.702	0.946	1.000	1136
REACTOME_SIGNALING_BY_CYTOSOLIC_FGFR1_FUSION_MUTANTS	18	0.288	0.813	0.710	0.946	1.000	4894
REACTOME_INTERFERON_ALPHA_BETA_SIGNALING	47	0.231	0.809	0.793	0.950	1.000	1175
REACTOME_SIGNALING_BY_NOTCH1	66	0.218	0.808	0.828	0.951	1.000	3349
REACTOME_CROSS_PRESENTATION_OF_SOLUBLE_EXOGENOUS_ANTIGENS_ENDOSOMES	45	0.234	0.807	0.815	0.952	1.000	4312
REACTOME_DISASSEMBLY_OF_THE_DESTRUCTION_COMPLEX_AND_RECRUITMENT_OF_AXIN_TO_THE_MEMBRANE	26	0.265	0.807	0.751	0.951	1.000	629
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_CELL_CYCLE_GENES	48	0.227	0.807	0.789	0.950	1.000	1282
REACTOME_RNA_POLYMERASE_II_TRANSCRIPTION_TERMINATION	63	0.219	0.807	0.791	0.949	1.000	4896
REACTOME_GLUCAGON_SIGNALING_IN_METABOLIC_REGULATION	16	0.295	0.806	0.727	0.949	1.000	2182
REACTOME_CATION_COUPLED_CHLORIDE_COTRANSPORTERS	4	0.449	0.804	0.715	0.951	1.000	2994

REACTOME_GLUCONEOGENESIS	25	0.268	0.803	0.771	0.952	1.000	2706
REACTOME_LATE_ENDOSOMAL_MICROAUTOPHAGY	30	0.257	0.801	0.784	0.954	1.000	2703
REACTOME_PI_3K_CASCADE_FGFR1	8	0.359	0.800	0.741	0.954	1.000	720
REACTOME_GABA_SYNTHESIS_RELEASE_REUPTAKE_AND_DEGRADATION	10	0.341	0.800	0.739	0.954	1.000	1678
REACTOME_CELLULAR_HEXOSE_TRANSPORT	12	0.323	0.800	0.715	0.953	1.000	3564
REACTOME_ANTIVIRAL_MECHANISM_BY_IFN_STIMULATED_GENES	74	0.210	0.797	0.835	0.956	1.000	3779
REACTOME_DNA_DAMAGE_RECOGNITION_IN_GG_NER	37	0.240	0.795	0.809	0.959	1.000	3779
REACTOME_CD209_DC_SIGNALING	18	0.288	0.795	0.756	0.958	1.000	3953
REACTOME_TCF_DEPENDENT_SIGNALING_IN_RESPONSE_TO_WNT	150	0.188	0.793	0.916	0.960	1.000	3985
REACTOME_KILLING_MECHANISMS	9	0.342	0.791	0.738	0.961	1.000	2378
REACTOME_CYCLIN_D_ASSOCIATED_EVENTS_IN_G1	46	0.229	0.789	0.826	0.963	1.000	3480
REACTOME_REGULATION_OF_MCEP2_EXPRESSION_AND_ACTIVITY	29	0.258	0.788	0.790	0.964	1.000	1249
REACTOME_FORMATION_OF_RNA_POL_II_ELONGATION_COMPLEX	56	0.220	0.788	0.804	0.963	1.000	2789
REACTOME_ROLE_OF_SECOND_MESSENGERS_IN_NETRIN_1_SIGNALING	3	0.479	0.787	0.764	0.963	1.000	2494
REACTOME_PROTEIN_METHYLATION	16	0.291	0.787	0.765	0.962	1.000	2175
REACTOME_SEROTONIN_NEUROTRANSMITTER_RELEASE_CYCLE	11	0.326	0.784	0.726	0.965	1.000	1496
REACTOME_INTERLEUKIN_15_SIGNALING	10	0.326	0.781	0.754	0.970	1.000	3707
REACTOME_KERATAN_SULFATE_KERATIN_METABOLISM	23	0.261	0.781	0.790	0.969	1.000	3610
REACTOME_ACTIVATED_PKN1_STIMULATES_TRANSCRIPTION_OF_AR_ANDROGEN_RECEPTOR REGULATED_GENES_KLK2_AND_KLK3	14	0.293	0.779	0.737	0.970	1.000	4687
REACTOME_ADP_SIGNALLING_THROUGH_P2Y_PURINOCEPTOR_12	10	0.323	0.778	0.724	0.970	1.000	2180
REACTOME_SUMO_IS_CONJUGATED_TO_E1_UBA2_SAE1	5	0.397	0.773	0.732	0.977	1.000	4031
REACTOME_PEROXISOMAL_PROTEIN_IMPORT	55	0.215	0.772	0.858	0.977	1.000	1569

REACTOME_TRANSCRIPTIONAL_REGULATION_BY_SMALL_RNAS	57	0.212	0.766	0.868	0.985	1.000	2672
REACTOME_DISEASES_ASSOCIATED_WITH_N_GLYCOSYLATION_OF_PROTEINS	17	0.274	0.766	0.788	0.984	1.000	1559
REACTOME_RNA_POLYMERASE_I_TRANSCRIPTION_TERMINATION	30	0.242	0.766	0.823	0.983	1.000	2549
REACTOME_MAPK1_ERK2_ACTIVATION	8	0.340	0.766	0.761	0.982	1.000	5263
REACTOME_SIGNALING_BY_HIPPO	19	0.274	0.765	0.814	0.982	1.000	4364
REACTOME_PROTEIN_LOCALIZATION	151	0.180	0.764	0.941	0.982	1.000	2951
REACTOME_MASTL_FACILITATES_MITOTIC_PROGRESSION	10	0.322	0.758	0.772	0.989	1.000	3550
REACTOME_APOPTOTIC_CLEAVAGE_OF_CELL_ADHESION_PROTEINS	8	0.338	0.757	0.764	0.989	1.000	3597
REACTOME_PRE_NOTCH_EXPRESSION_AND_PROCESSING	57	0.211	0.757	0.897	0.988	1.000	3326
REACTOME_FORMATION_OF_XYLULOSE_5_PHOSPHATE	5	0.386	0.757	0.744	0.988	1.000	577
REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS	21	0.259	0.756	0.827	0.988	1.000	3290
REACTOME_PROGRAMMED_CELL_DEATH	163	0.176	0.756	0.970	0.987	1.000	1851
REACTOME_ACYL_CHAIN_REMODELING_OF_PS	11	0.306	0.755	0.781	0.987	1.000	2769
REACTOME_NEGATIVE_REGULATION_OF_NOTCH4_SIGNALING	54	0.208	0.753	0.888	0.989	1.000	4312
REACTOME_SYNTHESIS_OF_PROSTAGLANDINS_PG_AND_THROMBOXANES_TX	9	0.322	0.748	0.784	0.995	1.000	1097
REACTOME_RNA_POLYMERASE_I_TRANSCRIPTION	60	0.203	0.746	0.894	0.996	1.000	3350
REACTOME_SHC_RELATED_EVENTS_TRIGGERED_BY_IGF1R	7	0.348	0.745	0.801	0.996	1.000	4574
REACTOME_RESOLUTION_OF_SISTER_CHROMATID_COHESION	116	0.182	0.745	0.953	0.995	1.000	2493
REACTOME_RECOGNITION_AND_ASSOCIATION_OF_DNA_GLYCOSYLASE_WITH_SITE_CONTAINING_AN_AFFECTED_PURINE	19	0.262	0.745	0.849	0.994	1.000	3185
REACTOME_AMINE_LIGAND_BINDING_RECEPTORS	6	0.360	0.745	0.806	0.993	1.000	320
REACTOME_FRS_MEDIATED_FGF_R3_SIGNALING	11	0.307	0.744	0.794	0.993	1.000	1136

REACTOME_P75_NTR_RECEPTOR_MEDIATED_SIGNALLING	87	0.191	0.744	0.929	0.992	1.000	2841
REACTOME_DEFECTS_IN_BIOTIN_BTN_METABOLISM	8	0.339	0.743	0.776	0.992	1.000	2489
REACTOME_TYSND1_CLEAVES_PEROXISOMAL_PROTEINS	7	0.346	0.743	0.770	0.991	1.000	8318
REACTOME_INTERFERON_GAMMA_SIGNALING	57	0.205	0.742	0.908	0.990	1.000	3834
REACTOME_SIGNALING_BY_FGFR1_IN_DISEASE	28	0.239	0.742	0.864	0.990	1.000	4894
REACTOME_SIGNAL_AMPLIFICATION	16	0.268	0.741	0.817	0.989	1.000	2180
REACTOME_MITOTIC_PROPHASE	91	0.187	0.741	0.937	0.988	1.000	2672
REACTOME_CRISTAE_FORMATION	29	0.239	0.741	0.856	0.988	1.000	5312
REACTOME_SYNTHESIS_OF_PC	23	0.251	0.741	0.846	0.987	1.000	1217
REACTOME_AKT_PHOSPHORYLATED_TARGETS_IN_THE_CYTOSOL	14	0.278	0.740	0.793	0.987	1.000	4634
REACTOME_LDL_CLEARANCE	18	0.264	0.740	0.835	0.986	1.000	817
REACTOME_ADP_SIGNALLING_THROUGH_P2Y_PURINOCEPTOR_1	11	0.303	0.739	0.787	0.985	1.000	3490
REACTOME_TRANSCRIPTION_OF_THE_HIV_GENOME	66	0.201	0.739	0.930	0.985	1.000	3028
REACTOME_SCF_SKP2_MEDIATED_DEGRADATION_OF_P27_P21	59	0.199	0.737	0.908	0.985	1.000	4312
REACTOME_METABOLISM_OF_NUCLEOTIDES	84	0.190	0.737	0.929	0.985	1.000	2691
REACTOME_G1_S_DNA_DAMAGE_CHECKPOINTS	65	0.199	0.737	0.937	0.984	1.000	4312
REACTOME_REGULATION_OF_RUNX2_EXPRESSION_AND_ACTIVITY	66	0.196	0.736	0.918	0.983	1.000	4312
REACTOME_Glutamate_Neurotransmitter_Release_Cycle	15	0.276	0.735	0.825	0.984	1.000	1496
REACTOME_TRANSLATION_OF_STRUCTURAL_PROTEINS	25	0.246	0.734	0.866	0.984	1.000	3303
REACTOME_DOWNSTREAM_SIGNALLING_OF_ACTIVATED_FGFR1	15	0.272	0.734	0.831	0.983	1.000	816
REACTOME_GENOME_REPLICATION_AND_TRANSCRIPTION	6	0.359	0.732	0.777	0.985	1.000	3208
REACTOME_HDACS_DEACETYLATE_HISTONES	38	0.217	0.731	0.884	0.984	1.000	4605
REACTOME_FGFR2_ALTERNATIVE_SPLICING	26	0.238	0.731	0.878	0.983	1.000	3383
REACTOME_DCC_MEDIATED_ATTRACTIVE_SIGNALING	12	0.294	0.730	0.822	0.984	1.000	2765
REACTOME_CONSTITUTIVE_SIGNALLING_BY_EGFRVIII	12	0.285	0.727	0.815	0.986	1.000	2078
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_MECP2	46	0.211	0.724	0.898	0.988	1.000	1249

REACTOME_LIPOPHAGY	8	0.327	0.723	0.804	0.988	1.000	2017
REACTOME_SIGNALING_BY_NOT CH3	40	0.217	0.723	0.906	0.987	1.000	2775
REACTOME_DEGRADATION_OF_ DVL	53	0.201	0.723	0.935	0.986	1.000	4312
REACTOME_TNFR2_NON_CANO NICAL_NF_KB_PATHWAY	76	0.188	0.723	0.956	0.985	1.000	4324
REACTOME_LTC4_CYSLTR_MEDI ATED_IL4_PRODUCTION	2	0.475	0.721	0.823	0.986	1.000	3780
REACTOME_SENSING_OF_DNA_ DOUBLE_STRAND_BREAKS	6	0.349	0.718	0.812	0.988	1.000	4402
REACTOME_ASSOCIATION_OF_T RIC_CCT_WITH_TARGET_PROTEI NS_DURING_BIOSYNTHESIS	35	0.217	0.718	0.908	0.988	1.000	1271
REACTOME_SMALL_INTERFERIN G_RNA_SIRNA_BIOGENESIS	9	0.311	0.713	0.815	0.991	1.000	1991
REACTOME_THE_RETINOID_CYC LE_IN_CONES_DAYLIGHT_VISION	1	0.536	0.709	0.913	0.995	1.000	5903
REACTOME_LOSS_OF_MECP2_BI NDING_ABILITY_TO_THE_NCOR_ SMRT_COMPLEX	7	0.334	0.709	0.804	0.994	1.000	8463
REACTOME_RNA_POLYMERASE_ I_PROMOTER_ESCAPE	40	0.210	0.706	0.894	0.996	1.000	4944
REACTOME_PYRUVATE_METAB OLISM	26	0.231	0.706	0.868	0.995	1.000	4247
REACTOME_CONVERSION_FRO M_APC_C_CDC20_TO_APC_C_C DH1_IN_LATE_ANAPHASE	20	0.246	0.704	0.875	0.996	1.000	3142
REACTOME_DOWNREGULATION _OF_ERBB4_SIGNALING	8	0.317	0.703	0.846	0.996	1.000	1569
REACTOME_DAP12_SIGNALING	21	0.240	0.703	0.889	0.995	1.000	816
REACTOME_DEGRADATION_OF_ AXIN	53	0.195	0.700	0.947	0.997	1.000	4312
REACTOME_DEACTIVATION_OF_ THE_BETA_CATENIN_TRANSACTI VATING_COMPLEX	35	0.214	0.700	0.905	0.996	1.000	3779
REACTOME_MICRORNA_MIRNA _BIOGENESIS	24	0.233	0.700	0.894	0.995	1.000	2357
REACTOME_ANTIGEN_ACTIVATE S_B_CELL_RECEPTOR_BCR_LEAD ING_TO_GENERATION_OF_SECO ND_MESSENGERS	22	0.237	0.698	0.873	0.995	1.000	3050
REACTOME_RECYCLING_OF_BILE _ACIDS_AND_SALTS	8	0.319	0.697	0.833	0.996	1.000	1886
REACTOME_TRANS_GOLGI_NET WORK_VESICLE_BUDDING	68	0.184	0.697	0.964	0.995	1.000	3171
REACTOME_BBSOME_MEDIATE D_CARGO_TARGETING_TO_CILI UM	20	0.242	0.695	0.885	0.995	1.000	1347
REACTOME_RUNX1_INTERACTS_ WITH_CO_FACTORS_WHOSE_PR	35	0.213	0.695	0.909	0.994	1.000	2129

ECISE_EFFECT_ON_RUNX1_TARGETS_IS_NOT_KNOWN							
REACTOME_SYNTHESIS_SECRETION_AND_DEACYLATION_OF_GHERLIN	6	0.337	0.694	0.824	0.994	1.000	3865
REACTOME_DAP12_INTERACTIONS	24	0.231	0.691	0.881	0.996	1.000	816
REACTOME_CLASS_I_MHC_MEDIATED_ANTIGEN_PROCESSING_PRESENTATION	319	0.150	0.691	1.000	0.995	1.000	4009
REACTOME_REGULATION_OF_PTEN_LOCALIZATION	9	0.296	0.690	0.845	0.995	1.000	1569
REACTOME_SYNTHESIS_OF_VERY_LONG_CHAIN_FATTY_ACYL_COAS	15	0.260	0.690	0.871	0.994	1.000	336
REACTOME_MRNA_SPLICING_MINOR_PATHWAY	52	0.195	0.688	0.939	0.994	1.000	4484
REACTOME_PASSIVE_TRANSPORT_BY_AQUAPORINS	4	0.365	0.686	0.826	0.995	1.000	2333
REACTOME_HIV_TRANSCRIPTION_INITIATION	44	0.199	0.686	0.950	0.994	1.000	3028
REACTOME_BIOSYNTHESIS_OF_EPA_DERIVED_SPMS	2	0.459	0.685	0.864	0.994	1.000	6876
REACTOME_RRNA_PROCESSING	197	0.156	0.684	0.992	0.994	1.000	4028
REACTOME_JOSEPHIN_DOMAIN_DUBS	10	0.293	0.683	0.877	0.994	1.000	1569
REACTOME_VIRAL_MESSENGER_RNA_SYNTHESIS	44	0.199	0.681	0.939	0.994	1.000	2493
REACTOME_FORMATION_OF_TCNER_PRE_INCISION_COMPLEX	52	0.194	0.680	0.952	0.994	1.000	2789
REACTOME_NUCLEOBASE_CATABOLISM	25	0.224	0.678	0.905	0.995	1.000	3102
REACTOME_INOSITOL_PHOSPHATE_METABOLISM	36	0.201	0.674	0.919	0.997	1.000	3670
REACTOME_NECTIN_NECL_TRANS_HETERODIMERIZATION	4	0.368	0.674	0.838	0.996	1.000	683
REACTOME_MRNA_SPLICING	186	0.154	0.671	1.000	0.998	1.000	3858
REACTOME_MITOCHONDRIAL_BIOGENESIS	87	0.172	0.671	0.984	0.997	1.000	4502
REACTOME_METALLOPROTEASE_DUBS	21	0.230	0.671	0.918	0.996	1.000	2866
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_DNA_REPAIR_GENES	60	0.181	0.670	0.974	0.996	1.000	2991
REACTOME_PRC2_METHYLATES_HISTONES_AND_DNA	23	0.226	0.666	0.926	0.998	1.000	52
REACTOME_SLBP_DEPENDENT_PROCESSING_OF_REPLICATION_DEPENDENT_HISTONE_PRE_MRNAS	11	0.273	0.665	0.872	0.998	1.000	5002
REACTOME_CITRIC_ACID_CYCLE_TCA_CYCLE	22	0.230	0.664	0.912	0.997	1.000	1823

REACTOME_REGULATION_OF_IF NA_SIGNALING	12	0.271	0.663	0.888	0.997	1.000	2842
REACTOME_NR1H2_NR1H3_REG ULATE_GENE_EXPRESSION_TO_ CONTROL_BILE_ACID_HOMEOST ASIS	7	0.320	0.662	0.880	0.997	1.000	8641
REACTOME_ERYTHROPOIETIN_A CTIVATES_STAT5	6	0.328	0.661	0.874	0.997	1.000	3480
REACTOME_SIGNALING_BY_NTR K2_TRKB_	21	0.226	0.660	0.907	0.996	1.000	2378
REACTOME_ZINC_EFFLUX_AND_ COMPARTMENTALIZATION_BY_T HE_SLC30_FAMILY	6	0.323	0.659	0.880	0.996	1.000	3706
REACTOME_RNA_POLYMERASE_ II_TRANSCRIBES_SNRNA_GENES	74	0.174	0.659	0.978	0.995	1.000	2559
REACTOME_CLEC7A_DECTIN_1_I NDUCES_NFAT_ACTIVATION	11	0.267	0.655	0.894	0.997	1.000	1713
REACTOME_PTEN_REGULATION REACTOME_REGULATION_OF_T P53_ACTIVITY_THROUGH_ACETY LATION	135	0.158	0.655	0.994	0.996	1.000	4312
REACTOME_PYRUVATE_METAB OLISM_AND_CITRIC_ACID_TCA_ CYCLE	30	0.208	0.654	0.944	0.995	1.000	3716
REACTOME_INFLAMMASOMES	49	0.188	0.653	0.951	0.995	1.000	2897
REACTOME_CALCITONIN_LIKE_LI GAND_RECEPTORS	12	0.270	0.652	0.917	0.995	1.000	2831
REACTOME_CALCITONIN_LIKE_LI GAND_RECEPTORS	3	0.385	0.651	0.878	0.995	1.000	4036
REACTOME_FBXW7_MUTANTS_ AND_NOTCH1_IN_CANCER	5	0.328	0.650	0.875	0.995	1.000	2850
REACTOME_TRANSCRIPTIONAL_ REGULATION_OF_WHITE_ADIPO CYTE_DIFFERENTIATION	73	0.173	0.645	0.992	0.997	1.000	762
REACTOME_DNA_DAMAGE_REV ERSAL	7	0.300	0.645	0.888	0.996	1.000	4294
REACTOME_ALPHA_OXIDATION_ OF_PHYTANATE	6	0.309	0.645	0.870	0.995	1.000	2638
REACTOME_PROCESSING_OF_C APPED_INTRON_CONTAINING_P RE_MRNA	236	0.143	0.644	1.000	0.994	1.000	3796
REACTOME_TRANSPORT_OF_M ATURE_TRANSCRIPT_TO_CYTOPL ASM	79	0.167	0.639	0.988	0.997	1.000	3768
REACTOME_TRANSCRIPTIONAL_ ACTIVATION_OF_MITOCHONDRI AL_BIOGENESIS	51	0.179	0.639	0.970	0.996	1.000	3006
REACTOME_METHYLATION	10	0.264	0.631	0.919	1.000	1.000	3829
REACTOME_ACTIVATED_NTRK2_ SIGNALS_THROUGH_RAS	7	0.297	0.630	0.901	1.000	1.000	4574
REACTOME_SARS_COV_INFECTI ONS	74	0.166	0.628	0.995	1.000	1.000	2713

REACTOME_REGULATION_OF_MRNA_STABILITY_BY_PROTEINS_THAT_BIND_AU_RICH_ELEMENTS	85	0.159	0.622	0.992	1.000	1.000	4312
REACTOME_LYSINE_CATABOLISM	10	0.267	0.621	0.937	1.000	1.000	537
REACTOME_SIGNALING_BY_NOTCH4	79	0.161	0.617	1.000	1.000	1.000	4312
REACTOME_APC_C_CDH1_MEDIATED_DEGRADATION_OF_CDC20_AND_OTHER_APC_C_CDH1_TARGETED_PROTEINS_IN_LATE_MITOSIS_EARLY_G1	72	0.161	0.617	0.995	1.000	1.000	4312
REACTOME_MITOCHONDRIAL_PROTEIN_IMPORT	62	0.169	0.614	0.987	1.000	1.000	3138
REACTOME_RUNX1_REGULATES_ESTROGEN_RECEPTOR_MEDIATED_TRANSCRIPTION	5	0.312	0.612	0.906	1.000	1.000	1908
REACTOME_MET_RECEPTOR_RECYCLING	7	0.289	0.612	0.932	1.000	1.000	5052
REACTOME_NS1_MEDIATED_EFFECTS_ON_HOST_PATHWAYS	40	0.180	0.611	0.980	1.000	1.000	2493
REACTOME_APC_C_MEDIATED_DEGRADATION_OF_CELL_CYCLE_PROTEINS	85	0.155	0.608	0.998	1.000	1.000	4312
REACTOME_TRANSPORT_OF_THE_SLBP_DEPENDANT_MATURE_MRNA	36	0.179	0.604	0.969	1.000	1.000	2493
REACTOME_ANTIGEN_PRESENTATION_FOLDING_ASSEMBLY_AND_PEPTIDE_LOADING_OF_CLASS_I_MHC	24	0.198	0.603	0.971	1.000	1.000	2229
REACTOME_MITOTIC_METAPHASE_AND_ANAPHASE	224	0.135	0.600	1.000	1.000	1.000	3611
REACTOME_ERYTHROPOIETIN_ACTIVATES_PHOSPHOLIPASE_C_GAMMA_PLCG	6	0.287	0.598	0.911	1.000	1.000	3480
REACTOME_SIALIC_ACID_METABOLISM	20	0.209	0.597	0.942	1.000	1.000	2628
REACTOME_SYNTHESIS_OF_LEUKOTRIENES_LT_AND_EOXINS_EX	6	0.285	0.594	0.918	1.000	1.000	1445
REACTOME_CYTOSOLIC_TRNA_AMINOACYLATION	23	0.200	0.592	0.961	1.000	1.000	3640
REACTOME_MET_ACTIVATES_PI3K_AKT_SIGNALING	4	0.313	0.589	0.902	1.000	1.000	1771
REACTOME_PRE_NOTCH_PROCESSING_IN_GOLGI	16	0.214	0.589	0.949	1.000	1.000	3326
REACTOME_SEPARATION_OF_SISTER_CHROMATIDS	179	0.136	0.589	1.000	1.000	1.000	2493
REACTOME_SIGNALING_BY_PDGFR_IN_DISEASE	17	0.211	0.588	0.956	1.000	1.000	3322

REACTOME_ALPHA_LINOLENIC_OMEGA3_AND_LINOLEIC_OMEGA6_ACID_METABOLISM	11	0.234	0.583	0.944	1.000	1.000	4989
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_ADDITIONAL_CELL_CYCLE_GENES_WHOSE_EXACT_ROLE_IN_THE_P53_PATHWAY_REMAIN_UNCERTAIN	21	0.201	0.579	0.967	1.000	1.000	3791
REACTOME_SIRT1_NEGATIVELY_REGULATES_RRNA_EXPRESSION	18	0.206	0.578	0.974	1.000	1.000	4817
REACTOME_SODIUM_CALCIIUM_EXCHANGERS	4	0.322	0.577	0.921	1.000	1.000	8625
REACTOME_PURINE_CATABOLISM	15	0.213	0.574	0.958	1.000	1.000	361
REACTOME_REGULATION_OF_PTEN_STABILITY_AND_ACTIVITY	66	0.155	0.573	0.997	1.000	1.000	4312
REACTOME_RUNX3_REGULATES_IMMUNE_RESPONSE_AND_CELL_MIGRATION	2	0.370	0.571	0.944	1.000	1.000	1908
REACTOME_NA_CL_DEPENDENT_NEUROTRANSMITTER_TRANSPORTERS	2	0.373	0.569	0.944	1.000	1.000	1892
REACTOME_SIGNALING_BY_FGF_R3_FUSIONS_IN_CANCER	9	0.244	0.567	0.934	1.000	1.000	4574
REACTOME_MITOCHONDRIAL_UNCOUPLING	4	0.310	0.566	0.941	0.999	1.000	4038
REACTOME_ESTROGEN_BIOSYNTHESIS	3	0.337	0.565	0.951	0.999	1.000	8434
REACTOME_SLC_TRANSPORTER_DISORDERS	54	0.156	0.564	0.995	0.998	1.000	2493
REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_METHYLATION	19	0.199	0.559	0.976	0.999	1.000	4568
REACTOME_THE_FATTY_ACID_CYCLING_MODEL	4	0.310	0.559	0.943	0.998	1.000	4038
REACTOME_BASE_EXCISION_REPAIR_AP_SITE_FORMATION	26	0.182	0.557	0.986	0.998	1.000	3185
REACTOME_ABC_FAMILY_PROTEINS_MEDIATED_TRANSPORT	85	0.144	0.555	0.998	0.997	1.000	4312
REACTOME_HCMV_LATE_EVENTS	60	0.152	0.555	0.998	0.997	1.000	3295
REACTOME_BETA_OXIDATION_OF_DECANOYL_COA_TO_OCTANOYL_COA_COA	6	0.271	0.553	0.960	0.996	1.000	9273
REACTOME_NEF_MEDIATED_CD8_DOWN_REGULATION	7	0.256	0.549	0.953	0.996	1.000	2576
REACTOME_REGULATION_OF_PYRUVATE_DEHYDROGENASE_PDH_COMPLEX	15	0.204	0.549	0.978	0.996	1.000	4247
REACTOME_SUMOYLATION_OF_RNA_BINDING_PROTEINS	47	0.158	0.543	0.996	0.996	1.000	2720

REACTOME_B_WICH_COMPLEX_POSITIVELY_REGULATES_RRNA_EXPRESSION	41	0.158	0.528	0.991	1.000	1.000	3796
REACTOME_CREB1_PHOSPHORYLATION_THROUGH_THE_ACTIVATION_OF_ADENYLATE_CYCLASE	8	0.234	0.528	0.969	0.999	1.000	910
REACTOME_ERYTHROPOIETIN_ACTIVATES_PHOSPHOINOSITIDE_3_KINASE_PI3K	8	0.236	0.523	0.970	0.999	1.000	3480
REACTOME_ABERRANT_REGULATION_OF_MITOTIC_G1_S_TRANSITION_IN_CANCER_DUE_TO_RB1_DEFECTS	16	0.194	0.522	0.980	0.998	1.000	1769
REACTOME_ACTIVATED_NTRK3_SIGNALS_THROUGH_PI3K	5	0.274	0.520	0.958	0.998	1.000	1814
REACTOME_HDL_ASSEMBLY	5	0.260	0.505	0.967	1.000	1.000	9401
REACTOME_PHOSPHORYLATION_OF_EMI1	6	0.244	0.497	0.974	1.000	1.000	9608
REACTOME_BIOTIN_TRANSPORT_AND_METABOLISM	11	0.207	0.497	0.974	1.000	1.000	2489
REACTOME_NEF_MEDIATED_DOWNREGULATION_OF_MHC_CLASSES_I_COMPLEX_CELL_SURFACE_EXPRESSION	9	0.221	0.495	0.971	0.999	1.000	4136
REACTOME_SUMOYLATION_OF_IMMUNE_RESPONSE_PROTEINS	11	0.196	0.478	0.987	1.000	1.000	2498
REACTOME_NEPHRIN_FAMILY_I_INTERACTIONS	16	0.176	0.478	0.995	1.000	1.000	4350
REACTOME_NUCLEAR_PORE_COMPLEX_NPC_DISASSEMBLY	36	0.143	0.470	1.000	1.000	1.000	2493
REACTOME_PROCESSING_OF_SMDT1	15	0.175	0.464	0.995	1.000	1.000	10485
REACTOME_CONDENSATION_OF_PROPHASE_CHROMOSOMES	23	0.153	0.452	1.000	1.000	1.000	3550
REACTOME_PI3K_AKT_ACTIVATION	7	0.205	0.438	0.992	1.000	1.000	10107
REACTOME_SUMOYLATION_OF_DNA_METHYLATION_PROTEINS	16	0.156	0.426	1.000	1.000	1.000	4102
REACTOME_ACTIVATION_OF_CASPASES_THROUGH_APOPTOSOME_MEDIATED_CLEAVAGE	6	0.203	0.412	1.000	1.000	1.000	10138
REACTOME_NEGATIVE_EPIGENETIC_REGULATION_OF_RRNA_EXPRESSION	58	0.111	0.399	1.000	1.000	1.000	3548
REACTOME_GALACTOSE_CATABOLISM	5	0.205	0.395	1.000	0.999	1.000	4508