

## ITGAL-related GSEA

High expre	GS DETAILS	SIZE	ES	NES	NOM p-val
1	KEGG_T_CELL_RECEPTOR_SIGNALING	102	0.75	2.19	0
2	KEGG_B_CELL_RECEPTOR_SIGNALING	73	0.7	2.1	0
3	KEGG_ACUTE_MYELOID_LEUKEMIA	57	0.58	2.12	0
4	KEGG_FC_GAMMA_R_MEDIATED_PHA	94	0.58	1.99	0
5	KEGG_NEUROTROPHIN_SIGNALING_PATHWAY	122	0.48	1.98	0
6	KEGG_CHEMOKINE_SIGNALING_PATHWAY	172	0.7	1.98	0
7	KEGG_THYROID_CANCER	29	0.58	1.98	0.004
8	KEGG_FC_EPSILON_RI_SIGNALING_PATHWAY	71	0.63	1.97	0
9	KEGG_VIRAL_MYOCARDITIS	60	0.73	1.97	0
10	KEGG_LEUKOCYTE_TRANSENDOTHELIAL_MIGRATION	101	0.61	1.95	0
11	KEGG_JAK_STAT_SIGNALING_PATHWAY	115	0.66	1.94	0
12	KEGG_TOLL_LIKE_RECEPTOR_SIGNALING_PATHWAY	88	0.68	1.93	0
13	KEGG_NATURAL_KILLER_CELL_MEDIATED_CYTOTOXICITY	106	0.71	1.92	0
14	KEGG_APOPTOSIS	83	0.53	1.91	0.002
15	KEGG_RIG_I_LIKE_RECEPTOR_SIGNALING_PATHWAY	54	0.5	1.9	0.002
16	KEGG_COLORECTAL_CANCER	62	0.49	1.86	0.002
17	KEGG_ANTIGEN_PROCESSING_AND_PRESENTATION	61	0.73	1.86	0
18	KEGG_CELL_ADHESION_MOLECULES_INTERACTIONS	122	0.71	1.84	0
19	KEGG_CYTOKINE_CYTOKINE_RECEPTOR_INTERACTIONS	211	0.75	1.83	0
20	KEGG_HEMATOPOIETIC_CELL_LINEAGE_DIFFERENTIATION	76	0.81	1.83	0
21	KEGG_LYSOSOME	121	0.43	1.81	0.028
22	KEGG_LEISHMANIA_INFECTION	69	0.73	1.79	0.002
23	KEGG_PRION_DISEASES	32	0.65	1.77	0
24	KEGG_PHOSPHATIDYLINOSITOL_SIGNALING_PATHWAY	69	0.52	1.77	0.004
25	KEGG_PRIMARY_IMMUNODEFICIENCY	31	0.88	1.77	0
26	KEGG_NOD_LIKE_RECEPTOR_SIGNALING_PATHWAY	60	0.69	1.76	0
27	KEGG_REGULATION_OF_AUTOPHAGY	20	0.53	1.76	0.019
28	KEGG_ENDOCYTOSIS	175	0.39	1.75	0.006
29	KEGG_VEGF_SIGNALING_PATHWAY	69	0.5	1.75	0.004
30	KEGG_MAPK_SIGNALING_PATHWAY	235	0.48	1.75	0
31	KEGG_NON_SMALL_CELL_LUNG_CANCER	53	0.47	1.75	0.012
32	KEGG_SNARE_INTERACTIONS_IN_VESICLES	38	0.45	1.74	0.019
33	KEGG_ENDOMETRIAL_CANCER	50	0.44	1.74	0.013
34	KEGG_TYPE_I_DIABETES_MELLITUS	38	0.8	1.72	0
35	KEGG_TRYPTOPHAN_METABOLISM	34	0.63	1.71	0.006
36	KEGG_AMYOTROPHIC_LATERAL_SCLEROSIS	47	0.51	1.71	0.004
37	KEGG_INTESTINAL_IMMUNE_NETWORKING	38	0.84	1.71	0
38	KEGG_CYTOSOLIC_DNA_SENSING_PATHWAY	41	0.6	1.7	0.016
39	KEGG_ALLOGRAFT_REJECTION	32	0.86	1.7	0
40	KEGG_REGULATION_OF_ACTIN_CYTOSKELETON	182	0.46	1.7	0.012
41	KEGG_TYPE_II_DIABETES_MELLITUS	39	0.6	1.68	0.002
42	KEGG_ASTHMA	21	0.89	1.67	0
43	KEGG_NEUROACTIVE_LIGAND_RECEPTOR_INTERACTIONS	151	0.66	1.67	0
44	KEGG_EPITHELIAL_CELL_SIGNALING_PATHWAY	66	0.43	1.66	0.006
45	KEGG_PATHWAYS_IN_CANCER	302	0.44	1.65	0.006
46	KEGG_CALCIIUM_SIGNALING_PATHWAY	142	0.59	1.65	0.002
47	KEGG_MTOR_SIGNALING_PATHWAY	50	0.42	1.65	0.024
48	KEGG_ERBB_SIGNALING_PATHWAY	85	0.43	1.64	0.016
49	KEGG_PANCREATIC_CANCER	70	0.44	1.64	0.015
50	KEGG_AUTOIMMUNE_THYROID_DISEASES	31	0.84	1.64	0
51	KEGG_INSULIN_SIGNALING_PATHWAY	122	0.36	1.62	0.004
52	KEGG_GNRH_SIGNALING_PATHWAY	86	0.49	1.61	0.016
53	KEGG_CHRONIC_MYELOID_LEUKEMIA	73	0.38	1.61	0.021
54	KEGG_DILATED_CARDIOMYOPATHY	75	0.63	1.61	0.006
55	KEGG_PATHOGENIC_ESCHERICHIA_COLI	50	0.42	1.61	0.031
56	KEGG_ADIPOCYTOKINE_SIGNALING_PATHWAY	59	0.46	1.61	0.012

57	KEGG_GRAFT_VERSUS_HOST_DISEASE	32	0.83	1.61	0
58	KEGG_HYPERTROPHIC_CARDIOMYOPATHY	69	0.62	1.6	0.004
59	KEGG_GLIOMA	61	0.45	1.6	0.027
60	KEGG_SYSTEMIC_LUPUS_ERYTHEMATOSUS	82	0.64	1.6	0.022
61	KEGG_PANTOTHENATE_AND_COA_BIOSYNTHESIS	16	0.64	1.59	0.017
62	KEGG_ABC_TRANSPORTERS	37	0.61	1.58	0.02
63	KEGG_VASCULAR_SMOOTH_MUSCLE_CELL_DEVELOPMENT	100	0.54	1.57	0.027
64	KEGG_ARRHYTHMOGENIC_RIGHT_VENTRICLE	64	0.61	1.57	0.015
65	KEGG_LONG_TERM_POTENTIATION	59	0.46	1.57	0.027
66	KEGG_NOTCH_SIGNALING_PATHWAY	45	0.42	1.55	0.051
67	KEGG_INOSITOL_PHOSPHATE_METABOLISM	53	0.45	1.54	0.031
68	KEGG_COMPLEMENT_AND_COAGULATION_CASCADE	59	0.61	1.53	0.028
69	KEGG_FOCAL_ADHESION	187	0.49	1.53	0.056
70	KEGG_AMINO_SUGAR_AND_NUCLEOTIDE_METABOLISM	44	0.42	1.53	0.059
71	KEGG_GLYCOSAMINOGLYCAN_BIOSYNTHESIS	22	0.58	1.51	0.041
72	KEGG_LONG_TERM_DEPRESSION	58	0.52	1.51	0.038
73	KEGG_RENAL_CELL_CARCINOMA	69	0.38	1.5	0.065
74	KEGG_ADHERENS_JUNCTION	70	0.38	1.5	0.077
75	KEGG_RENIN_ANGIOTENSIN_SYSTEM	15	0.69	1.48	0.04
76	KEGG_MELANOGENESIS	86	0.47	1.47	0.033
77	KEGG_AXON_GUIDANCE	119	0.46	1.46	0.045
78	KEGG_TIGHT_JUNCTION	112	0.37	1.45	0.045

Low expression correlated

1	KEGG_CITRATE_CYCLE_TCA_CYCLE	28	-0.62	-2.05	0.006
2	KEGG_RNA_POLYMERASE	29	-0.59	-1.97	0.006
3	KEGG_SPLICEOSOME	114	-0.47	-1.95	0.027
4	KEGG_AMINOACYL_TRNA_BIOSYNTHESIS	41	-0.52	-1.89	0.042
5	KEGG_PROTEIN_EXPORT	23	-0.62	-1.87	0.006
6	KEGG_TERPENOID_BACKBONE_BIOSYNTHESIS	15	-0.69	-1.76	0.012
7	KEGG_RIBOSOME	85	-0.7	-1.75	0.025
8	KEGG_OXIDATIVE_PHOSPHORYLATION	110	-0.54	-1.73	0.047
9	KEGG_MISMATCH_REPAIR	22	-0.66	-1.72	0.036
10	KEGG_RNA_DEGRADATION	56	-0.42	-1.71	0.054

KLRB1-related GSEA

High expression	GS	SIZE	ES	NES	NOM p-val
1	KEGG_T_CELL_RECEPTOR_SIGNALING_PATHWAY	102	0.73	2.07	0
2	KEGG_FC_EPSILON_R1_SIGNALING_PATHWAY	71	0.67	2.04	0
3	KEGG_ACUTE_MYELOID_LEUKEMIA	57	0.61	2.23	0
4	KEGG_FC_GAMMA_R_MEDIATED_PHAGOCYTOSIS	94	0.6	1.99	0
5	KEGG_APOPTOSIS	83	0.56	1.98	0
6	KEGG_B_CELL_RECEPTOR_SIGNALING_PATHWAY	73	0.68	1.98	0
7	KEGG_VEGF_SIGNALING_PATHWAY	69	0.57	1.95	0
8	KEGG_NATURAL_KILLER_CELL_MEDIATED_CYTOTOXICITY	107	0.73	1.95	0
9	KEGG_LEUKOCYTE_TRANSENDOTHELIAL_MIGRATION	102	0.63	1.94	0
10	KEGG_ENDOCYTOSIS	175	0.44	1.94	0
11	KEGG_JAK_STAT_SIGNALING_PATHWAY	115	0.67	1.91	0
12	KEGG_TOLL_LIKE_RECEPTOR_SIGNALING_PATHWAY	88	0.68	1.9	0
13	KEGG_CHEMOKINE_SIGNALING_PATHWAY	172	0.7	1.9	0
14	KEGG_CARDIAC_MUSCLE_CONTRACTILITY	56	0.63	1.89	0
15	KEGG_ANTIGEN_PROCESSING_AND_PRESENTATION	61	0.74	1.88	0.002
16	KEGG_CELL_ADHESION_MOLECULES	123	0.74	1.87	0
17	KEGG_VIRAL_MYOCARDITIS	61	0.74	1.86	0
18	KEGG_TRYPTOPHAN_METABOLISM	34	0.69	1.86	0
19	KEGG_LYSOSOME	121	0.45	1.84	0.013
20	KEGG_NEUROTROPHIN_SIGNALING_PATHWAY	122	0.46	1.83	0
21	KEGG_THYROID_CANCER	29	0.54	1.82	0.006
22	KEGG_CYTOSOLIC_DNA_SENSING_PATHWAY	41	0.64	1.81	0.004

23	KEGG_RIG_I_LIKE_RECEPTOR_SIGNAL	54	0.49	1.77	0.014
24	KEGG_SYSTEMIC_LUPUS_ERYTHEMAI	82	0.71	1.77	0
25	KEGG_MAPK_SIGNALING_PATHWAY	235	0.5	1.77	0
26	KEGG_CYTOKINE_CYTOKINE_RECEPT	211	0.74	1.77	0
27	KEGG_LEISHMANIA_INFECTION	69	0.73	1.77	0
28	KEGG_HEMATOPOIETIC_CELL_LINEAC	76	0.8	1.76	0
29	KEGG_GNRH_SIGNALING_PATHWAY	86	0.53	1.76	0
30	KEGG_COMPLEMENT_AND_COAGULA	59	0.71	1.75	0
31	KEGG_NOD_LIKE_RECEPTOR_SIGNALI	60	0.7	1.75	0
32	KEGG_PRIMARY_IMMUNODEFICIENCY	31	0.87	1.74	0
33	KEGG_TYPE_II_DIABETES_MELLITUS	39	0.62	1.73	0.002
34	KEGG_COLORECTAL_CANCER	62	0.46	1.73	0.004
35	KEGG_INTESTINAL_IMMUNE_NETWOR	38	0.86	1.72	0
36	KEGG_VASCULAR_SMOOTH_MUSCLE_	100	0.59	1.72	0.006
37	KEGG_PRION_DISEASES	32	0.63	1.71	0.011
38	KEGG_TYPE_I_DIABETES_MELLITUS	38	0.81	1.7	0
39	KEGG_ALDOSTERONE_REGULATED_SO	37	0.63	1.7	0.004
40	KEGG_AMYOTROPHIC_LATERAL_SCLI	47	0.5	1.7	0.01
41	KEGG_ASTHMA	21	0.9	1.68	0
42	KEGG_ADIPOCYTOKINE_SIGNALING_P	59	0.48	1.68	0.006
43	KEGG_NON_SMALL_CELL_LUNG_CAN	53	0.46	1.67	0.01
44	KEGG_LONG_TERM_DEPRESSION	58	0.58	1.67	0.004
45	KEGG_ABC_TRANSPORTERS	37	0.65	1.66	0.008
46	KEGG_MTOR_SIGNALING_PATHWAY	50	0.42	1.65	0.021
47	KEGG_GLYCEROPHOSPHOLIPID_META	70	0.48	1.64	0.01
48	KEGG_HYPERTROPHIC_CARDIOMYOP	69	0.63	1.64	0.002
49	KEGG_ALLOGRAFT_REJECTION	32	0.86	1.64	0.004
50	KEGG_AUTOIMMUNE_THYROID_DISEA	31	0.86	1.63	0
51	KEGG_NEUROACTIVE_LIGAND_RECEP	151	0.64	1.62	0
52	KEGG_ENDOMETRIAL_CANCER	50	0.42	1.62	0.042
53	KEGG_CALCIIUM_SIGNALING_PATHWA	142	0.58	1.62	0.004
54	KEGG_ETHER_LIPID_METABOLISM	29	0.62	1.62	0.014
55	KEGG_INSULIN_SIGNALING_PATHWAY	122	0.36	1.6	0.016
56	KEGG_DILATED_CARDIOMYOPATHY	75	0.62	1.59	0.004
57	KEGG_GRAFT_VERSUS_HOST_DISEASI	32	0.84	1.59	0.004
58	KEGG_FATTY_ACID_METABOLISM	37	0.54	1.58	0.049
59	KEGG_ARACHIDONIC_ACID_METABOL	47	0.66	1.57	0.011
60	KEGG_PEROXISOME	73	0.43	1.57	0.036
61	KEGG_ERBB_SIGNALING_PATHWAY	85	0.42	1.56	0.018
62	KEGG_LONG_TERM_POTENTIATION	59	0.46	1.55	0.021
63	KEGG_AMINO_SUGAR_AND_NUCLEOT	44	0.42	1.54	0.058
64	KEGG_REGULATION_OF_ACTIN_CYTO	183	0.43	1.54	0.032
65	KEGG_PATHWAYS_IN_CANCER	302	0.42	1.53	0.01
66	KEGG_PHOSPHATIDYLINOSITOL_SIGN	69	0.46	1.51	0.047
67	KEGG_PANTOTHENATE_AND_COA_BI	16	0.62	1.49	0.024
68	KEGG_PPAR_SIGNALING_PATHWAY	55	0.51	1.48	0.033
69	KEGG_EPITHELIAL_CELL_SIGNALING_	66	0.39	1.48	0.053
70	KEGG_GLYCOSAMINOGLYCAN_BIOSY	22	0.55	1.47	0.061
71	KEGG_RENAL_CELL_CARCINOMA	69	0.38	1.47	0.08
72	KEGG_ARRHYTHMOGENIC_RIGHT_VE	64	0.57	1.47	0.035
73	KEGG_DORSO_VENTRAL_AXIS_FORM	21	0.5	1.46	0.076
74	KEGG_ALPHA_LINOLENIC_ACID_MET	15	0.68	1.45	0.055

Low expres	GS	SIZE	ES	NES	NOM p-val
1	KEGG_BASE_EXCISION_REPAIR	33	-0.65	-1.96	0.002
2	KEGG_SPLICEOSOME	114	-0.48	-1.89	0.031
3	KEGG_AMINOACYL_TRNA_BIOSYNTH	41	-0.48	-1.73	0.048
4	KEGG_MISMATCH_REPAIR	22	-0.69	-1.72	0.014

5	KEGG_DNA_REPLICATION	35	-0.7	-1.6	0.028
6	KEGG_NUCLEOTIDE_EXCISION_REPAIR	43	-0.48	-1.58	0.073
7	KEGG_ONE_CARBON_POOL_BY_FOLATE	16	-0.56	-1.56	0.041
8	KEGG_HOMOLOGOUS_RECOMBINATION	25	-0.69	-1.48	0.046





