B cells
Plasma cells
Plasmacytoid dendritic cells
B cells naive
B cells memory
Acinar cells
Adipocyte progenitor cells
Adipocytes
Adrenergic neurons
Airway epithelial cells
Fibroblasts
Natural killer T cells
Cholangiocytes
Principal cells
Luminal epithelial cells
Mesangial cells
Microglia
Hematopoietic stem cells
T cells
Epithelial cells
Pericytes
Interneurons
Airway goblet cells
Podocytes
Pulmonary alveolar type I cells
Mesothelial cells
Neural stem/precursor cells
Pancreatic stellate cells
Endothelial cells
Hepatic stellate cells
Smooth muscle cells
Myofibroblasts
Stromal cells
Platelets
Goblet cells
Ductal cells
Clara cells
Paneth cells
Sertoli cells
Epsilon cells
Kupffer cells
Macrophages
Monocytes
Dendritic cells
Langerhans cells
Alveolar macrophages
Microfold cells
Pulmonary alveolar type II cells
Ependymal cells
Ciliated cells
Germ cells
Olfactory epithelial cells
T memory cells
NK cells
T cells naive
T cytotoxic cells
Leydig cells
Nuocytes
Meningeal cells
Satellite glial cells
Luteal cells
Melanocytes
Gamma delta T cells
Loop of Henle cells
Osteoblasts
IGLC2
FOS
SCGB2A1
COL3A1
MMP7
APOE
SERPINA1
TPPP3
LTB
SFRP4
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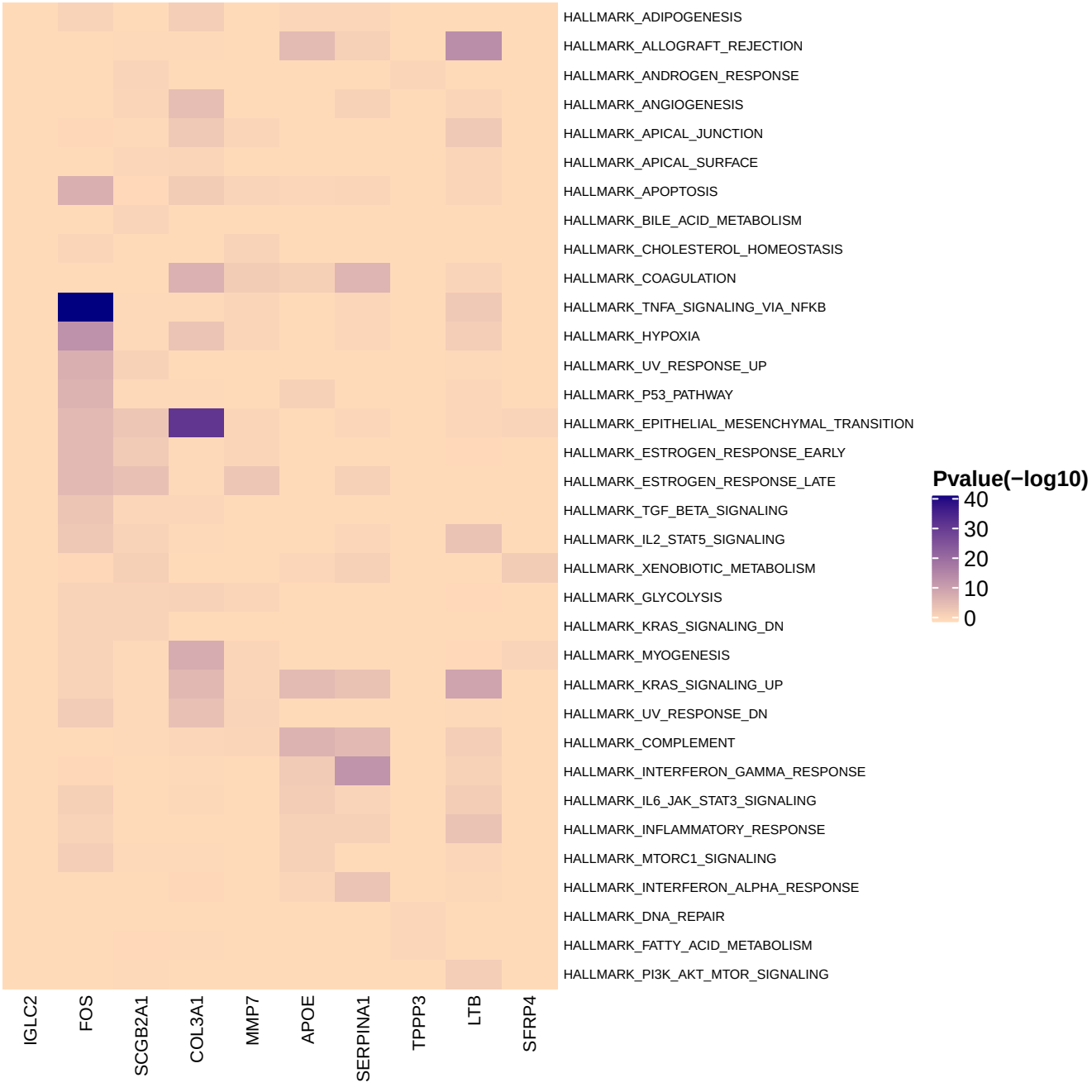
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HALLMARK_ANDROGEN_RESPONSE
HALLMARK_ANGIOGENESIS
HALLMARK_APICAL_JUNCTION
HALLMARK_APICAL_SURFACE
HALLMARK_APOPTOSIS
HALLMARK_BILE_ACID_METABOLISM
HALLMARK_CHOLESTEROL_HOMEOSTASIS
HALLMARK_COAGULATION
HALLMARK_TNFA_SIGNALING_VIA_NFKB
HALLMARK_HYPOXIA
HALLMARK_UV_RESPONSE_UP
HALLMARK_P53_PATHWAY
HALLMARK_EPITHELIAL_MESENCHYMAL_TRANSITION
HALLMARK_ESTROGEN_RESPONSE_EARLY
HALLMARK_ESTROGEN_RESPONSE_LATE
HALLMARK_TGF_BETA_SIGNALING
HALLMARK_IL2_STAT5_SIGNALING
HALLMARK_XENOBIOTIC_METABOLISM
HALLMARK_GLYCOLYSIS
HALLMARK_KRAS_SIGNALING_DN
HALLMARK_MYOGENESIS
HALLMARK_KRAS_SIGNALING_UP
HALLMARK_UV_RESPONSE_DN
HALLMARK_COMPLEMENT
HALLMARK_INTERFERON_GAMMA_RESPONSE
HALLMARK_IL6_JAK_STAT3_SIGNALING
HALLMARK_INFLAMMATORY_RESPONSE
HALLMARK_MTORC1_SIGNALING
HALLMARK_INTERFERON_ALPHA_RESPONSE
HALLMARK_DNA_REPAIR
HALLMARK_FATTY_ACID_METABOLISM
HALLMARK_PI3K_AKT_MTOR_SIGNALING
IGLC2
FOS
SCGB2A1
COL3A1
MMP7
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SERPINA1
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LTB
SFRP4
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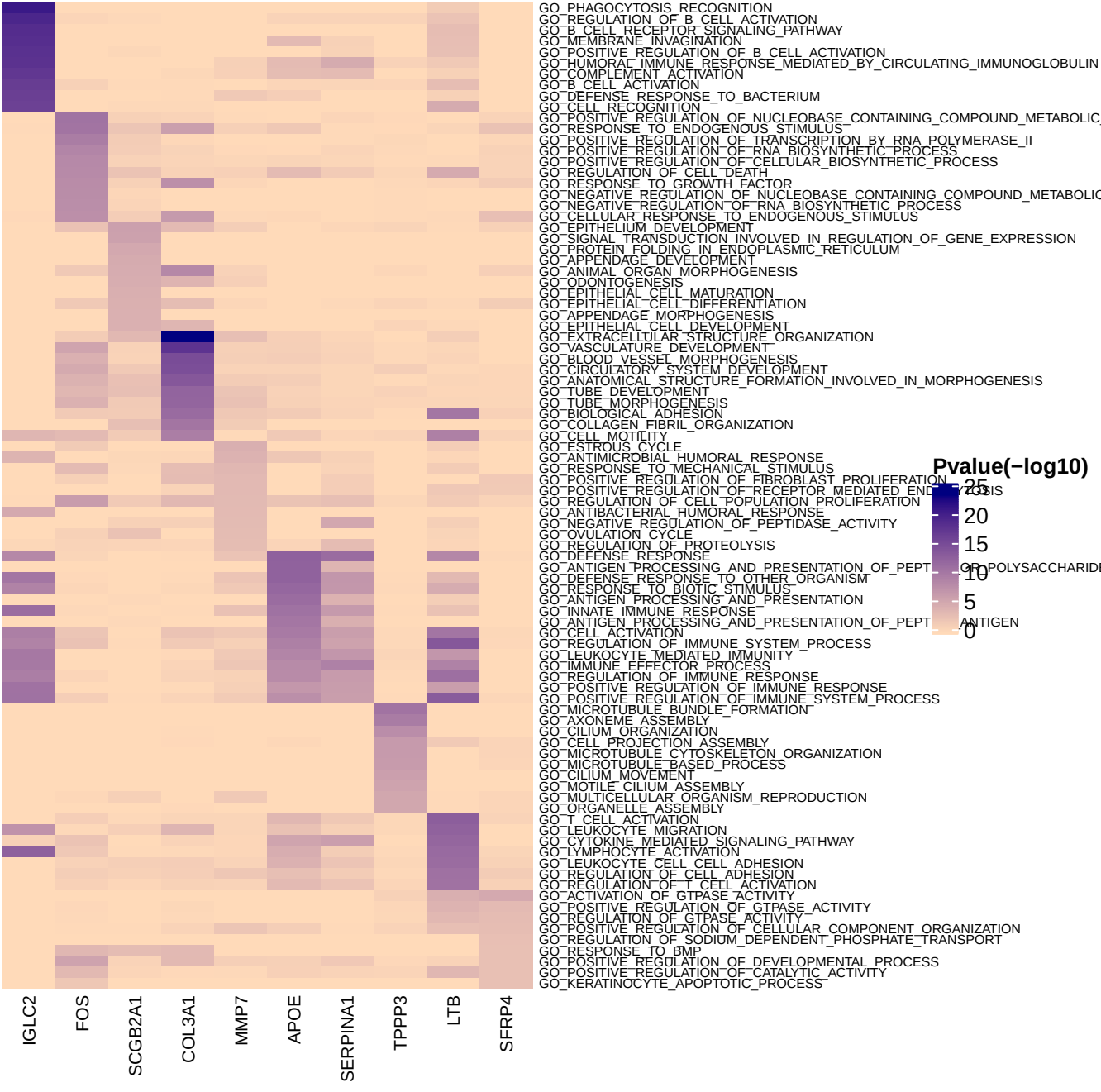
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GO_REGULATION_OF_B_CELL_ACTIVATION
GO_B_CELL_RECEPTOR_SIGNALING_PATHWAY
GO_MEMBRANE_INVAGINATION
GO_POSITIVE_REGULATION_OF_B_CELL_ACTIVATION
GO_HUMORAL_IMMUNE_RESPONSE_MEDIATED_BY_CIRCULATING_IMMUNOGLOBULIN
GO_COMPLEMENT_ACTIVATION
GO_B_CELL_ACTIVATION
GO_DEFENSE_RESPONSE_TO_BACTERIUM
GO_CELL_RECOGNITION
GO_POSITIVE_REGULATION_OF_NUCLEOBASE_CONTAINING_COMPOUND_METABOLIC
GO_RESPONSE_TO_ENDOGENOUS_STIMULUS
GO_POSITIVE_REGULATION_OF_TRANSCRIPTION_BY_RNA_POLYMERASE_II
GO_POSITIVE_REGULATION_OF_RNA_BIOSYNTHETIC_PROCESS
GO_POSITIVE_REGULATION_OF_CELLULAR_BIOSYNTHETIC_PROCESS
GO_REGULATION_OF_CELL_DEATH
GO_RESPONSE_TO_GROWTH_FACTOR
GO_NEGATIVE_REGULATION_OF_NUCLEOBASE_CONTAINING_COMPOUND_METABOLIC
GO_NEGATIVE_REGULATION_OF_RNA_BIOSYNTHETIC_PROCESS
GO_CELLULAR_RESPONSE_TO_ENDOGENOUS_STIMULUS
GO_EPITHELIUM_DEVELOPMENT
GO_SIGNAL_TRANSDUCTION_INVOLVED_IN_REGULATION_OF_GENE_EXPRESSION
GO_PROTEIN_FOLDING_IN_ENDOPLASMIC_RETICULUM
GO_APPENDAGE_DEVELOPMENT
GO_ANIMAL_ORGAN_MORPHOGENESIS
GO_ODONTOGENESIS
GO_EPITHELIAL_CELL_MATURATION
GO_EPITHELIAL_CELL_DIFFERENTIATION
GO_APPENDAGE_MORPHOGENESIS
GO_EPITHELIAL_CELL_DEVELOPMENT
GO_EXTRACELLULAR_STRUCTURE_ORGANIZATION
GO_VASCULATURE_DEVELOPMENT
GO_BLOOD_VESSEL_MORPHOGENESIS
GO_CIRCULATORY_SYSTEM_DEVELOPMENT
GO_ANATOMICAL_STRUCTURE_FORMATION_INVOLVED_IN_MORPHOGENESIS
GO_TUBE_DEVELOPMENT
GO_TUBE_MORPHOGENESIS
GO_BIOLOGICAL_ADHESION
GO_COLLAGEN_FIBRIL_ORGANIZATION
GO_CELL_MOTILITY
GO_ESTROUS_CYCLE
GO_ANTIMICROBIAL_HUMORAL_RESPONSE
GO_RESPONSE_TO_MECHANICAL_STIMULUS
GO_POSITIVE_REGULATION_OF_FIBROBLAST_PROLIFERATION
GO_POSITIVE_REGULATION_OF_RECEPTOR_MEDIATED_END
GO_REGULATION_OF_CELL_POPULATION_PROLIFERATION
GO_ANTIBACTERIAL_HUMORAL_RESPONSE
GO_NEGATIVE_REGULATION_OF_PEPTIDASE_ACTIVITY
GO_OVULATION_CYCLE
GO_REGULATION_OF_PROTEOLYSIS
GO_DEFENSE_RESPONSE
GO_ANTIGEN_PROCESSING_AND_PRESENTATION_OF_PEPT
GO_DEFENSE_RESPONSE_TO_OTHER_ORGANISM
GO_RESPONSE_TO_BIOTIC_STIMULUS
GO_ANTIGEN_PROCESSING_AND_PRESENTATION
GO_INNATE_IMMUNE_RESPONSE
GO_ANTIGEN_PROCESSING_AND_PRESENTATION_OF_PEPT
GO_CELL_ACTIVATION
GO_REGULATION_OF_IMMUNE_SYSTEM_PROCESS
GO_LEUKOCYTE_MEDIATED_IMMUNITY
GO_IMMUNE_EFFECTOR_PROCESS
GO_REGULATION_OF_IMMUNE_RESPONSE
GO_POSITIVE_REGULATION_OF_IMMUNE_RESPONSE
GO_POSITIVE_REGULATION_OF_IMMUNE_SYSTEM_PROCESS
GO_MICROTUBULE_BUNDLE_FORMATION
GO_AXONEME_ASSEMBLY
GO_CILIUM_ORGANIZATION
GO_CELL_PROJECTION_ASSEMBLY
GO_MICROTUBULE_CYTOSKELETON_ORGANIZATION
GO_MICROTUBULE_BASED_PROCESS
GO_CILIUM_MOVEMENT
GO_MOTILE_CILIUM_ASSEMBLY
GO_MULTICELLULAR_ORGANISM_REPRODUCTION
GO_ORGANELLE_ASSEMBLY
GO_T_CELL_ACTIVATION
GO_LEUKOCYTE_MIGRATION
GO_CYTOKINE_MEDIATED_SIGNALING_PATHWAY
GO_LYMPHOCYTE_ACTIVATION
GO_LEUKOCYTE_CELL_CELL_ADHESION
GO_REGULATION_OF_CELL_ADHESION
GO_REGULATION_OF_T_CELL_ACTIVATION
GO_ACTIVATION_OF_GTPASE_ACTIVITY
GO_POSITIVE_REGULATION_OF_GTPASE_ACTIVITY
GO_REGULATION_OF_GTPASE_ACTIVITY
GO_POSITIVE_REGULATION_OF_CELLULAR_COMPONENT_ORGANIZATION
GO_REGULATION_OF_SODIUM_DEPENDENT_PHOSPHATE_TRANSPORT
GO_RESPONSE_TO_BMP
GO_POSITIVE_REGULATION_OF_DEVELOPMENTAL_PROCESS
GO_POSITIVE_REGULATION_OF_CATALYTIC_ACTIVITY
GO_KERATINOCYTE_APOPTOTIC_PROCESS
IGLC2
FOS
SCGB2A1
COL3A1
MMP7
APOE
SERPINA1
TPPP3
LTB
SFRP4
Pvalue(−log10)
25
20
15
10
5
0

KEGG_ABC_TRANSPORTERS
KEGG_ACUTE_MYELOID_LEUKEMIA
KEGG_ADHERENS_JUNCTION
KEGG_ADIPOCYTOKINE_SIGNALING_PATHWAY
KEGG_ALANINE_ASPARTATE_AND_GLUTAMATE_METABOLISM
KEGG_ALDOSTERONE_REGULATED_SODIUM_REABSORPTION
KEGG_ALLOGRAFT_REJECTION
KEGG_ALPHA_LINOLENIC_ACID_METABOLISM
KEGG_ALZHEIMERS_DISEASE
KEGG_AMINO_SUGAR_AND_NUCLEOTIDE_SUGAR_METABOLISM
KEGG_MAPK_SIGNALING_PATHWAY
KEGG_COLORECTAL_CANCER
KEGG_LEISHMANIA_INFECTION
KEGG_B_CELL_RECEPTOR_SIGNALING_PATHWAY
KEGG_TOLL_LIKE_RECEPTOR_SIGNALING_PATHWAY
KEGG_T_CELL_RECEPTOR_SIGNALING_PATHWAY
KEGG_CIRCADIAN_RHYTHM_MAMMAL
KEGG_MATURITY_ONSET_DIABETES_OF_THE_YOUNG
KEGG_PRION_DISEASES
KEGG_NOTCH_SIGNALING_PATHWAY
KEGG_PROGESTERONE_MEDIATED_OOCYTE_MATURATION
KEGG_O_GLYCAN_BIOSYNTHESIS
KEGG_OOCYTE_MEIOSIS
KEGG_GLYCOSAMINOGLYCAN_BIOSYNTHESIS_KERATAN_SULFATE
KEGG_GNRH_SIGNALING_PATHWAY
KEGG_NICOTINATE_AND_NICOTINAMIDE_METABOLISM
KEGG_GLYCOSYLPHOSPHATIDYLINOSITOL_GPI_ANCHOR_BIOSYNTHESIS
KEGG_CELL_CYCLE
KEGG_GALACTOSE_METABOLISM
KEGG_GLYCOSPHINGOLIPID_BIOSYNTHESIS_LACTO_AND_NEOLACTO_SERIES
KEGG_ECM_RECEPTOR_INTERACTION
KEGG_FOCAL_ADHESION
KEGG_LEUKOCYTE_TRANSENDOTHELIAL_MIGRATION
KEGG_VASCULAR_SMOOTH_MUSCLE_CONTRACTION
KEGG_CELL_ADHESION_MOLECULES_CAMS
KEGG_SMALL_CELL_LUNG_CANCER
KEGG_COMPLEMENT_AND_COAGULATION_CASCADES
KEGG_PATHWAYS_IN_CANCER
KEGG_REGULATION_OF_ACTIN_CYTOSKELETON
KEGG_PROXIMAL_TUBULE_BICARBONATE_RECLAMATION
KEGG_WNT_SIGNALING_PATHWAY
KEGG_ASTHMA
KEGG_SYSTEMIC_LUPUS_ERYTHEMATOSUS
KEGG_ANTIGEN_PROCESSING_AND_PRESENTATION
KEGG_VIRAL_MYOCARDITIS
KEGG_GRAFT_VERSUS_HOST_DISEASE
KEGG_TYPE_I_DIABETES_MELLITUS
KEGG_INTESTINAL_IMMUNE_NETWORK_FOR_IGA_PRODUCTION
KEGG_AUTOIMMUNE_THYROID_DISEASE
KEGG_PATHOGENIC_ESCHERICHIA_COLI_INFECTION
KEGG_P53_SIGNALING_PATHWAY
KEGG_GAP_JUNCTION
KEGG_NEUROTROPHIN_SIGNALING_PATHWAY
KEGG_CYTOKINE_CYTOKINE_RECEPTOR_INTERACTION
KEGG_CHEMOKINE_SIGNALING_PATHWAY
KEGG_PRIMARY_IMMUNODEFICIENCY
KEGG_NATURAL_KILLER_CELL_MEDIATED_CYTOTOXICITY
KEGG_HEMATOPOIETIC_CELL_LINEAGE
KEGG_MTOR_SIGNALING_PATHWAY
KEGG_ARACHIDONIC_ACID_METABOLISM
KEGG_GLIOMA
KEGG_LONG_TERM_DEPRESSION
KEGG_MELANOMA
KEGG_HYPERTROPHIC_CARDIOMYOPATHY_HCM
KEGG_TGF_BETA_SIGNALING_PATHWAY
IGLC2
FOS
SCGB2A1
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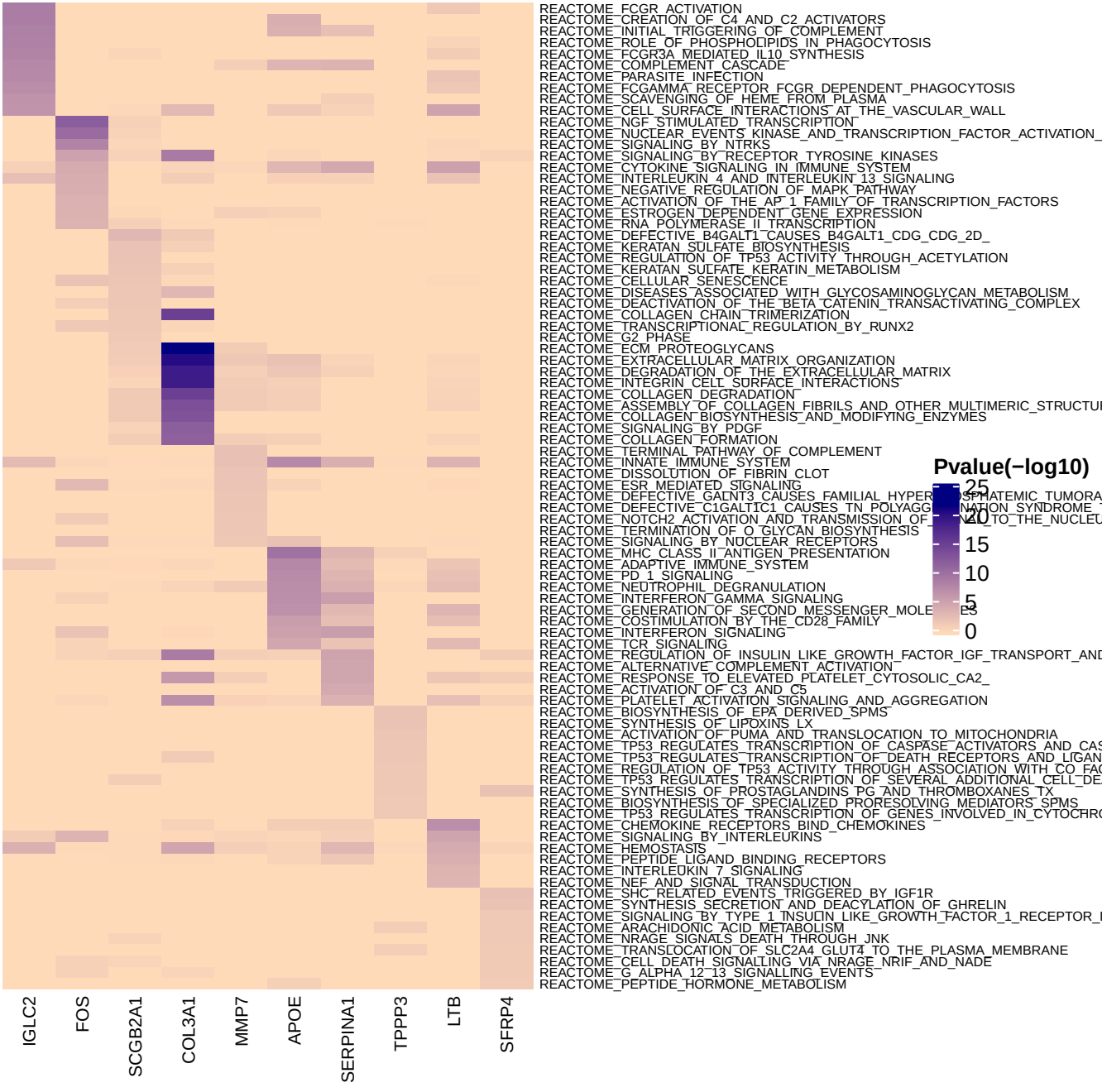
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REACTOME_INITIAL_TRIGGERING_OF_COMPLEMENT
REACTOME_ROLE_OF_PHOSPHOLIPIDS_IN_PHAGOCYTOSIS
REACTOME_FCGR3A_MEDIATED_IL10_SYNTHESIS
REACTOME_COMPLEMENT_CASCADE
REACTOME_PARASITE_INFECTION
REACTOME_FCGAMMA_RECEPTOR_FCGR_DEPENDENT_PHAGOCYTOSIS
REACTOME_SCAVENGING_OF_HEME_FROM_PLASMA
REACTOME_CELL_SURFACE_INTERACTIONS_AT_THE_VASCULAR_WALL
REACTOME_NGF_STIMULATED_TRANSCRIPTION
REACTOME_NUCLEAR_EVENTS_KINASE_AND_TRANSCRIPTION_FACTOR_ACTIVATION_
REACTOME_SIGNALING_BY_NTRKS
REACTOME_SIGNALING_BY_RECEPTOR_TYROSINE_KINASES
REACTOME_CYTOKINE_SIGNALING_IN_IMMUNE_SYSTEM
REACTOME_INTERLEUKIN_4_AND_INTERLEUKIN_13_SIGNALING
REACTOME_NEGATIVE_REGULATION_OF_MAPK_PATHWAY
REACTOME_ACTIVATION_OF_THE_AP_1_FAMILY_OF_TRANSCRIPTION_FACTORS
REACTOME_ESTROGEN_DEPENDENT_GENE_EXPRESSION
REACTOME_RNA_POLYMERASE_II_TRANSCRIPTION
REACTOME_DEFECTIVE_B4GALT1_CAUSES_B4GALT1_CDG_CDG_2D_
REACTOME_KERATAN_SULFATE_BIOSYNTHESIS
REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_ACETYLATION
REACTOME_KERATAN_SULFATE_KERATIN_METABOLISM
REACTOME_CELLULAR_SENESCENCE
REACTOME_DISEASES_ASSOCIATED_WITH_GLYCOSAMINOGLYCAN_METABOLISM
REACTOME_DEACTIVATION_OF_THE_BETA_CATENIN_TRANSACTIVATING_COMPLEX
REACTOME_COLLAGEN_CHAIN_TRIMERIZATION
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_RUNX2
REACTOME_G2_PHASE
REACTOME_ECM_PROTEOGLYCANS
REACTOME_EXTRACELLULAR_MATRIX_ORGANIZATION
REACTOME_DEGRADATION_OF_THE_EXTRACELLULAR_MATRIX
REACTOME_INTEGRIN_CELL_SURFACE_INTERACTIONS
REACTOME_COLLAGEN_DEGRADATION
REACTOME_ASSEMBLY_OF_COLLAGEN_FIBRILS_AND_OTHER_MULTIMERIC_STRUCTUR
REACTOME_COLLAGEN_BIOSYNTHESIS_AND_MODIFYING_ENZYMES
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REACTOME_COLLAGEN_FORMATION
REACTOME_TERMINAL_PATHWAY_OF_COMPLEMENT
REACTOME_INNATE_IMMUNE_SYSTEM
REACTOME_DISSOLUTION_OF_FIBRIN_CLOT
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REACTOME_DEFECTIVE_GALNT3_CAUSES_FAMILIAL_HYPER
SPHATEMIC_TUMORA
REACTOME_DEFECTIVE_C1GALTIC1_CAUSES_TN_POLYAGG
NATION_SYNDROME_
REACTOME_NOTCH2_ACTIVATION_AND_TRANSMISSION_OF_
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REACTOME_TERMINATION_OF_O_GLYCAN_BIOSYNTHESIS
REACTOME_SIGNALING_BY_NUCLEAR_RECEPTORS
REACTOME_MHC_CLASS_II_ANTIGEN_PRESENTATION
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REACTOME_PD_1_SIGNALING
REACTOME_NEUTROPHIL_DEGRANULATION
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REACTOME_COSTIMULATION_BY_THE_CD28_FAMILY
REACTOME_INTERFERON_SIGNALING
REACTOME_TCR_SIGNALING
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REACTOME_ALTERNATIVE_COMPLEMENT_ACTIVATION
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REACTOME_ACTIVATION_OF_C3_AND_C5
REACTOME_PLATELET_ACTIVATION_SIGNALING_AND_AGGREGATION
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REACTOME_SYNTHESIS_OF_LIPOXINS_LX
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REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_SEVERAL_ADDITIONAL_CELL_DE
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REACTOME_CHEMOKINE_RECEPTORS_BIND_CHEMOKINES
REACTOME_SIGNALING_BY_INTERLEUKINS
REACTOME_HEMOSTASIS
REACTOME_PEPTIDE_LIGAND_BINDING_RECEPTORS
REACTOME_INTERLEUKIN_7_SIGNALING
REACTOME_NEF_AND_SIGNAL_TRANSDUCTION
REACTOME_SHC_RELATED_EVENTS_TRIGGERED_BY_IGF1R
REACTOME_SYNTHESIS_SECRETION_AND_DEACYLATION_OF_GHRELIN
REACTOME_SIGNALING_BY_TYPE_1_INSULIN_LIKE_GROWTH_FACTOR_1_RECEPTOR_
REACTOME_ARACHIDONIC_ACID_METABOLISM
REACTOME_NRAGE_SIGNALS_DEATH_THROUGH_JNK
REACTOME_TRANSLOCATION_OF_SLC2A4_GLUT4_TO_THE_PLASMA_MEMBRANE
REACTOME_CELL_DEATH_SIGNALLING_VIA_NRAGE_NRIF_AND_NADE
REACTOME_G_ALPHA_12_13_SIGNALLING_EVENTS
REACTOME_PEPTIDE_HORMONE_METABOLISM
IGLC2
FOS
SCGB2A1
COL3A1
MMP7
APOE
SERPINA1
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LTB
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