

Table S5. Venn diagram breakdown of the core molecular KEGG pathways in relation to the GBM subtypes from microarray dataset.

| Names | total | elements |
|--|--------------|---|
| Classical Mesenchymal Neural Proneural | 43 | KEGG_GLYCOSPHINGOLIPID_BIOSYNTHESIS_GANGLIO_SERIES KEGG_LYSOSOME KEGG_GLYCOSAMINOGLYCAN_DEGRADATION KEGG_DNA_REPLICATION KEGG_GLUTATHIONE_METABOLISM KEGG_FOCAL_ADHESION KEGG_NOD_LIKE_RECEPTOR_SIGNALING_PATHWAY KEGG_FRUCTOSE_AND_MANNOSSE_METABOLISM KEGG_SNARE_INTERACTIONS_IN_VESICULAR_TRANSPORT KEGG_GLYCOLYSIS_GLUONEOGENESIS KEGG_PATHOGENIC_ESCHERICHIA_COLI_INFECTION KEGG_PROTEIN_EXPORT KEGG_GALACTOSE_METABOLISM KEGG_N_GLYCAN_BIOSYNTHESIS KEGG_OTHER_GLYCAN_DEGRADATION KEGG_NICOTINATE_AND_NICOTINAMIDE_METABOLISM KEGG_BASE_EXCISION_REPAIR KEGG_PROTEASOME KEGG_APOPTOSIS KEGG_P53_SIGNALING_PATHWAY KEGG_REGULATION_OF_ACTIN_CYTOSKELETON KEGG_ECM_RECEPTOR_INTERACTION KEGG_SMALL_CELL_LUNG_CANCER KEGG_VALINE_LEUCINE_AND_ISOLEUCINE_BIOSYNTHESIS KEGG_JAK_STAT_SIGNALING_PATHWAY KEGG_PYRIMIDINE_METABOLISM KEGG_DRUG_METABOLISM_OTHER_ENZYMES KEGG_ONE_CARBON_POOL_BY_FOLATE KEGG_PORPHYRIN_AND_CHLOROPHYLL_METABOLISM KEGG_PANCREATIC_CANCER KEGG_VIRAL_MYOCARDITIS KEGG_BLADDER_CANCER KEGG_PENTOSE_PHOSPHATE_PATHWAY |

Classical Mesenchymal Proneural

KEGG_GLYCOSPHINGOLIPID_BIOSYNTHESIS_GLOBO_SERIES
KEGG_STARCH_AND_SUCROSE_METABOLISM
KEGG_CELL_CYCLE
KEGG_GLYCOSAMINOGLYCAN_BIOSYNTHESIS_KERATAN_SULFATE
KEGG_AMINO_SUGAR_AND_NUCLEOTIDE_SUGAR_METABOLISM
KEGG_O_GLYCAN_BIOSYNTHESIS
KEGG_GLYCOSAMINOGLYCAN_BIOSYNTHESIS_HEPARAN_SULFATE
KEGG_PATHWAYS_IN_CANCER
KEGG_PANTOTHENATE_AND_COA_BIOSYNTHESIS
KEGG_GLYCOSAMINOGLYCAN_BIOSYNTHESIS_CHONDROITIN_SULFATE
17 KEGG_HYPERTROPHIC_CARDIOMYOPATHY_HCM
KEGG_COMPLEMENT_AND_COAGULATION_CASCADES
KEGG_PHENYLALANINE_METABOLISM
KEGG_INTESTINAL_IMMUNE_NETWORK_FOR_IGA_PRODUCTION
KEGG_STEROID_BIOSYNTHESIS
KEGG_FOLATE_BIOSYNTHESIS
KEGG_RIBOFLAVIN_METABOLISM
KEGG_RIBOSOME
KEGG_THYROID_CANCER
KEGG_CYTOKINE_CYTOKINE_RECEPTOR_INTERACTION
KEGG_TYROSINE_METABOLISM
KEGG_ALLOGRAFT_REJECTION
KEGG_OOCYTE_MEIOSIS
KEGG_AXON_GUIDANCE
KEGG_HEMATOPOIETIC_CELL_LINEAGE
KEGG_RENIN_ANGIOTENSIN_SYSTEM
KEGG_PROGESTERONE_MEDIATED_OOCYTE_MATURATION

Mesenchymal Neural Proneural

19 KEGG_CYSTEINE_AND_METHIONINE_METABOLISM
KEGG_CITRATE_CYCLE_TCA_CYCLE
KEGG_RNA_DEGRADATION
KEGG_ASCORBATE_AND_ALDARATE_METABOLISM
KEGG_GLYCOSYLPHOSPHATIDYLINOSITOL_GPI_ANCHOR_BIOSYNTHESIS
KEGG_RNA_POLYMERASE
KEGG_SPLICEOSOME
KEGG_UBIQUITIN_MEDIATED_PROTEOLYSIS
KEGG_GLYOXYLATE_AND_DICARBOXYLATE_METABOLISM

Classical Neural

KEGG_MISMATCH_REPAIR
KEGG_BASAL_TRANSCRIPTION_FACTORS
KEGG_NUCLEOTIDE_EXCISION_REPAIR
KEGG_HOMOLOGOUS_RECOMBINATION
KEGG_NON_HOMOLOGOUS_END_JOINING
KEGG_TERPENOID_BACKBONE_BIOSYNTHESIS
KEGG_TGF_BETA_SIGNALING_PATHWAY
KEGG_AMINOACYL_TRNA_BIOSYNTHESIS
KEGG_RIG_I_LIKE_RECEPTOR_SIGNALING_PATHWAY
KEGG_SELENOAMINO_ACID_METABOLISM
29 KEGG_GRAFT_VERSUS_HOST_DISEASE
KEGG_TIGHT_JUNCTION
KEGG_ENDOCYTOSIS
KEGG_SPHINGOLIPID_METABOLISM
KEGG_NEUROTROPHIN_SIGNALING_PATHWAY
KEGG_ACUTE_MYELOID_LEUKEMIA
KEGG_ENDOMETRIAL_CANCER
KEGG_COLORECTAL_CANCER
KEGG_VEGF_SIGNALING_PATHWAY
KEGG_CELL_ADHESION_MOLECULES_CAMS
KEGG_ADHERENS_JUNCTION
KEGG_TOLL_LIKE_RECEPTOR_SIGNALING_PATHWAY
KEGG_CHRONIC_MYELOID_LEUKEMIA
KEGG_ERBB_SIGNALING_PATHWAY
KEGG_LEUKOCYTE_TRANSENDOTHELIAL_MIGRATION
KEGG_INSULIN_SIGNALING_PATHWAY
KEGG_PRION_DISEASES
KEGG_BIOSYNTHESIS_OF_UNSATURATED_FATTY_ACIDS
KEGG_ARRHYTHMOGENIC_RIGHT_VENTRICULAR_CARDIOMYOPATHY_ARVC
KEGG_ADIPOCYTOKINE_SIGNALING_PATHWAY
KEGG_B_CELL_RECEPTOR_SIGNALING_PATHWAY
KEGG_PROSTATE_CANCER
KEGG_EPITHELIAL_CELL_SIGNALING_IN_HELICOBACTER_PYLORI_INFECTION
KEGG_LEISHMANIA_INFECTION
KEGG_FC_GAMMA_R_MEDIATED_PHAGOCYTOSIS
KEGG_VIBRIO_CHOLERAЕ_INFECTION

| | |
|-----------------------|--|
| | KEGG_CYTOSOLIC_DNA_SENSING_PATHWAY |
| | KEGG_RENAL_CELL_CARCINOMA |
| | KEGG_ANTIGEN_PROCESSING_AND_PRESENTATION |
| Mesenchymal Proneural | 9 KEGG_GLYCOPHINGOLIPID_BIOSYNTHESIS_LACTO_AND_NEOLACTO_SERIES |
| | KEGG_SULFUR_METABOLISM |
| | KEGG_PENTOSE_AND_GLUCURONATE_INTERCONVERSIONS |
| | KEGG_ALANINE_ASPARTATE_AND_GLUTAMATE_METABOLISM |
| | KEGG_HEDGEHOG_SIGNALING_PATHWAY |
| | KEGG_PURINE_METABOLISM |
| | KEGG_AUTOIMMUNE_THYROID_DISEASE |
| | KEGG_PARKINSONS_DISEASE |
| | KEGG_HUNTINGTONS_DISEASE |
| Classical | 21 KEGG_TYPE_II_DIABETES_MELLITUS |
| | KEGG_MELANOMA |
| | KEGG_PRIMARY_BILE_ACID_BIOSYNTHESIS |
| | KEGG_GNRH_SIGNALING_PATHWAY |
| | KEGG_FC_EPSILON_RI_SIGNALING_PATHWAY |
| | KEGG_VASCULAR_SMOOTH_MUSCLE_CONTRACTION |
| | KEGG_T_CELL_RECEPTOR_SIGNALING_PATHWAY |
| | KEGG_ALZHEIMERS_DISEASE |
| | KEGG_BASAL_CELL_CARCINOMA |
| | KEGG_SYSTEMIC_LUPUS_ERYTHEMATOSUS |
| | KEGG_ARACHIDONIC_ACID_METABOLISM |
| | KEGG_STEROID_HORMONE_BIOSYNTHESIS |
| | KEGG_PRIMARY_IMMUNODEFICIENCY |
| | KEGG_MAPK_SIGNALING_PATHWAY |
| | KEGG_GLIOMA |
| | KEGG_NATURAL_KILLER_CELL_MEDIATED_CYTOTOXICITY |
| | KEGG_MELANOGENESIS |
| | KEGG_AMYOTROPHIC_LATERAL_SCLEROSIS_ALS |
| | KEGG_DILATED_CARDIOMYOPATHY |
| | KEGG_GAP_JUNCTION |
| | KEGG_CHEMOKINE_SIGNALING_PATHWAY |
| Neural | 18 KEGG_FATTY_ACID_METABOLISM |
| | KEGG_ARGININE_AND_PROLINE_METABOLISM |
| | KEGG_NON_SMALL_CELL_LUNG_CANCER |

KEGG_ETHER_LIPID_METABOLISM
KEGG_GLYCINE_SERINE_AND_THREONINE_METABOLISM
KEGG_PEROXISOME
KEGG_MTOR_SIGNALING_PATHWAY
KEGG_DORSO_VENTRAL_AXIS_FORMATION
KEGG_LIMONENE_AND_PINENE_DEGRADATION
KEGG_BUTANOATE_METABOLISM
KEGG_VALINE_LEUCINE_AND_ISOLEUCINE_DEGRADATION
KEGG_NOTCH_SIGNALING_PATHWAY
KEGG_TRYPTOPHAN_METABOLISM
KEGG_PROPANOATE_METABOLISM
KEGG_CIRCADIAN_RHYTHM_MAMMAL
KEGG_ABC_TRANSPORTERS
KEGG_LYSINE_DEGRADATION
KEGG_PYRUVATE_METABOLISM