

Supplementary Table 3

GO terms, KEGG pathways, and DAVID functional annotations enriched in prognostic genes across key glioma mutations.

Glioma	Key Gene	Genes	Top Prognostic Gene Ontology Terms			KEGG Path.	Assoc. Annot.
			Bio. Processes	Mol. Function	Cell. Component		
	IDH	B3GNT7, NSUN7, AQP5	*carbon dioxide transport, *response to prostaglandin, *retinal metabolic process	*oxidoreductase activity, *retinal dehydro. activity	supramolecular fiber, AMPA receptor complex	Folate biosynthesis	C-type lectin, Inflam. response
	TP53	EDA2R, GNG5, CNN3	*mast cell activation, *mast cell degranulation, *mast cell immunity	*cyclindependent kinase inhibitor, *death receptor activity, *ammonia-lyase activity	Dendrite membrane, apicolateral plasma membrane	*Pathways in cancer, Thyroid cancer, Non-small cell lung cancer	ECM, Immunity, Leucine-rich repeat
	ATRX	TERT, DUSP6, HRASLS	*amine transport, *neg. regulation of cardiocyte diff.	*oligopeptide transporter activity, *peptide transporter activity	*plasma membrane comp., clathrin vesicle	Cushing syndrome, Hepatocellular carcinoma	Transmembrane, Cushing syndrome

	IDH + TP53	TERT, FKB9, MYT1	*sensory perception, *norepinephrine biosynthesis	oxidoreductase activity, folic acid transport	smooth ER, caveola	Vascular muscle contraction, Focal adhesion	Vision, Dev. protein, Cell adhesion
	IDH + ATRX	TERT, PARP4P3, OR4N2	*sterol transport reg., *T cell diff. in thymus	Aldehyde dehydro. activity, calcium channel reg.	AMPA receptor complex	Fatty acid deg., Glycerolipid metab.	Extra. space, Dev. protein
	IDH + TP53 + ATRX	HCN4, ACADL, GK2	*vascular wound healing, *angiogenesis in healing	Oligopeptide transporter activity	Clathrin transport vesicle	*Arginine biosynth., *Protein digestion	Cell adhesion, Immunity
LGG	IDH + code I	NSUN7, STAC, CHAD	*cation channel reg., *calcium ion transport	*DNA binding, seq-specific binding	lipoprotein particle	Glycerophospholipid metab.	DNA binding, Wnt signaling
GBM	EGFR	GJA1P1, ADAM8, TACR1	*cell-cell adhesion, *small molecule metab.	*pyruvate dehydro. kinase, *neurotrophin binding	*phagolysosome, secondary lysosome	*Fatty acid deg., PPAR signaling	Plasma membrane, Polar residues
	PTE N	GPRC5A, ZIC1, HKDC1	*glucose import, disaccharide biosynth.	*glucokinase activity, *fructokinase activity	*actin cytoskeleton, *cortical actin	*Carbon metab., *HIF-1 signaling	ATP binding, Glycoprotein