

Identification of Survival Genes in Human Glioblastoma Cells Using siRNA Screening

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Molecular Pharmacology

Supplementary Table S1

Genes identified as reproducibly essential genes for glioma cell viability using the binning method

Gene Symbol	Full Gene Name	Accession No	# of Bins	Percent viability (%)
DDX39	DEAD (Asp-Glu-Ala-Asp) box polypeptide 39	NM_138998	7	9.43
PSMD14	proteasome (prosome, macropain) 26S subunit, non-ATPase, 14	NM_005805	6	10.90
SPINK1	serine protease inhibitor, Kazal type 1	NM_003122	5	11.19
RAN	RAN, member RAS oncogene family	NM_006325	8	11.81
PSMC6	proteasome (prosome, macropain) 26S subunit, ATPase, 6	NM_002806	6	12.17
TLR2	toll-like receptor 2	NM_003264	5	12.30
K-ALPHA-1	K-ALPHA-1	NM_006082	7	12.63
BUB1B	BUB1 budding uninhibited by benzimidazoles 1 homolog beta (yeast)	NM_001211	5	13.49
PSMB4	proteasome (prosome, macropain) subunit, beta type, 4	NM_002796	5	13.93
GRHPR	glyoxylate reductase/hydroxypyruvate reductase	NM_012203	6	14.21
PSMC3	proteasome (prosome, macropain) 26S subunit, ATPase, 3	NM_002804	7	15.28
PRKCD	protein kinase C, delta	NM_006254	5	15.55
POLR2F	polymerase (RNA) II (DNA directed) polypeptide F	NM_021974	7	16.11

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AKT3	v-akt murine thymoma viral oncogene homolog 3 (protein kinase B, gamma)	NM_181690	5	16.28
PSMC5	proteasome (prosome, macropain) 26S subunit, ATPase, 5	NM_002805	5	17.08
PSMA1	proteasome (prosome, macropain) subunit, alpha type, 1	NM_148976	5	17.32
SPTLC1	serine palmitoyltransferase, long chain base subunit 1	NM_178324	7	17.67
CGI-04	tyrosyl-tRNA synthetase 2 (mitochondrial)	NM_015936	5	18.42
HLCS	holocarboxylase synthetase (biotin-[proprionyl-Coenzyme A-carboxylase (ATP-hydrolysing)] ligase)	NM_000411	6	18.63
TNFRSF10B	tumor necrosis factor receptor superfamily, member 10b	NM_147187	5	18.84
MPHOSPH1	M-phase phosphoprotein 1	NM_016195	5	18.84
SIAT4B	ST3 beta-galactoside alpha-2,3-sialyltransferase 2	NM_006927	7	18.85
PSMB2	proteasome (prosome, macropain) subunit, beta type, 2	NM_002794	6	18.88
DPYSL4	dihydropyrimidinase-like 4	NM_006426	5	19.00
UBL5	ubiquitin-like 5	NM_024292	5	19.09
AGA	aspartylglucosaminidase	NM_000027	5	19.42
GRCC9	GRCC9	NM_032641	5	19.50
TUBGCP6	tubulin, gamma complex associated protein 6	NM_020461	7	19.83

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PKD1L3	polycystic kidney disease 1-like 3	NM_181536	5	19.90
GRIN1	glutamate receptor, ionotropic, N-methyl D-aspartate 1	NM_007327	6	20.01
SIAT7E	ST6 (alpha-N-acetylneuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 5	NM_030965	7	20.03
TNNI3K	TNNI3 interacting kinase	NM_015978	5	20.08
ZAP128	ZAP128	NM_006821	6	20.51
GPX2	glutathione peroxidase 2 (gastrointestinal)	NM_002083	5	20.65
BTN2A3	butyrophilin, subfamily 2, member A3	NM_024018	7	21.10
POLR2A	polymerase (RNA) II (DNA directed) polypeptide A, 220kDa	NM_000937	5	21.33
CLCN3	chloride channel 3	NM_173872	7	22.20
PSMA4	proteasome (prosome, macropain) subunit, alpha type, 4	NM_002789	5	22.20
CHN1	chimerin (chimaerin) 1	NM_001025201	6	22.38
POLR2G	polymerase (RNA) II (DNA directed) polypeptide G	NM_002696	5	22.72
PSMA6	proteasome (prosome, macropain) subunit, alpha type, 6	NM_002791	6	23.10
RAB40B	RAB40B, member RAS oncogene family	NM_006822	5	23.11
SLC7A2	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2	NM_003046	7	23.17
PSMA3	proteasome (prosome, macropain) subunit, alpha type, 3	NM_152132	6	23.57

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GUSB	glucuronidase, beta	NM_000181	7	25.25
ARHGEF11	Rho guanine nucleotide exchange factor (GEF) 11	NM_014784	5	25.43
PIGQ	phosphatidylinositol glycan, class Q	NM_148920	6	26.07
PSMA5	proteasome (prosome, macropain) subunit, alpha type, 5	NM_002790	6	26.64
IDH3B	isocitrate dehydrogenase 3 (NAD+) beta	NM_174856	7	26.89
COX7A2	cytochrome c oxidase subunit VIIa polypeptide 2 (liver)	NM_001865	5	26.94
POMT1	protein-O-mannosyltransferase 1	NM_007171	6	27.85
RRM1	ribonucleotide reductase M1 polypeptide	NM_001033	7	28.41
PSMA2	proteasome (prosome, macropain) subunit, alpha type, 2	NM_002787	6	28.91
SMS	spermine synthase	NM_004595	6	29.64
ITGB3	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	NM_000212	5	29.77
BST1	bone marrow stromal cell antigen 1	NM_004334	5	31.12
CYP1B1	cytochrome P450, family 1, subfamily B, polypeptide 1	NM_000104	5	31.42
GALNS	galactosamine (N-acetyl)-6-sulfate sulfatase (Morquio syndrome, mucopolysaccharidosis type IVA)	NM_000512	5	32.58