

Table S8: Pathway-specific transcripts expressed by glioma-derived A2B5⁺ relative to A2B5⁺ GPCs

Pathway	Gene	Description	Ratio	q-value	
All A2B5⁺ gliomas (n=20) vs. A2B5⁺ GPCs (n=8)					
TGF- β	MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	8.05	1.47E-08	
	ID4	inhibitor of DNA binding 4, dominant negative helix-loop-helix protein	7.18	9.56E-07	
	ID1	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	7.14	3.27E-08	
	INHBA	inhibin, beta A	5.98	2.38E-06	
	RBX1	ring-box 1	4.52	6.38E-10	
	RHOA	ras homolog gene family, member A	4.35	5.75E-09	
	MAPK1	mitogen-activated protein kinase 1	3.98	4.45E-09	
	PPP2R1A	protein phosphatase 2 (formerly 2A), regulatory subunit A, alpha isoform	3.95	6.11E-08	
	DCN	decorin	3.41	1.75E-03	
	ZFYVE16	zinc finger, FYVE domain containing 16	3.31	1.34E-06	
	SMAD2	SMAD family member 2	3.12	3.61E-06	
	THBS4	thrombospondin 4	-3.28	2.70E-05	
	BMP7	bone morphogenetic protein 7	-3.44	3.03E-07	
	Wnt	MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	8.05	1.47E-08
		FOSL1	FOS-like antigen 1	6.45	2.26E-05
		TBL1XR1	transducin (beta)-like 1 X-linked receptor 1	4.67	6.60E-08
RAC2		ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)	4.63	7.95E-05	
CSNK2B		casein kinase 2, beta polypeptide	4.62	1.61E-11	
APC		adenomatous polyposis coli	4.60	6.13E-09	
RBX1		ring-box 1	4.52	6.38E-10	
PPP3R1		protein phosphatase 3 (formerly 2B), regulatory subunit B, alpha isoform	4.50	2.80E-07	
RHOA		ras homolog gene family, member A	4.35	5.75E-09	
TCF7L1		transcription factor 7-like 1 (T-cell specific, HMG-box)	4.18	2.76E-07	
PPP2R1A		protein phosphatase 2 (formerly 2A), regulatory subunit A, alpha isoform	3.95	6.11E-08	
CSNK1E		casein kinase 1, epsilon	3.91	5.99E-08	
RUVBL1		RuvB-like 1 (E. coli)	3.73	1.25E-05	
CSNK1A1		casein kinase 1, alpha 1	3.65	7.81E-07	
MAPK9		mitogen-activated protein kinase 9	3.44	2.88E-07	
PPP2R5C		protein phosphatase 2, regulatory subunit B', gamma isoform	3.33	1.12E-07	
TBL1X		transducin (beta)-like 1X-linked	3.26	3.49E-07	
NFATC3		nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3	3.24	2.00E-07	
SMAD2		SMAD family member 2	3.12	3.61E-06	
MAP3K7		mitogen-activated protein kinase kinase kinase 7	3.08	6.33E-06	
TCF7L2		transcription factor 7-like 2 (T-cell specific, HMG-box)	-3.01	3.41E-04	
DAAM2	dishevelled associated activator of morphogenesis 2	-3.71	1.78E-06		
WNT6	wingless-type MMTV integration site family, member 6	-3.77	2.39E-07		
PRICKLE1	prickle homolog 1 (Drosophila)	-4.17	1.62E-04		
SFRP1	secreted frizzled-related protein 1	-4.49	3.86E-04		

Pathway	Gene	Description	Ratio	q-value	
A2B5⁺ Low-grade (n=10) vs. A2B5⁺ GPCs (n=8)					
TGF- β	ID4	inhibitor of DNA binding 4, dominant negative helix-loop-helix protein	7.29	4.80E-05	
	ID1	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	6.26	1.36E-05	
	MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	5.47	2.22E-05	
	INHBA	inhibin, beta A	4.04	2.41E-03	
	ZFYVE16	zinc finger, FYVE domain containing 16	3.84	1.50E-05	
	RHOA	ras homolog gene family, member A	3.69	1.06E-05	
	RBX1	ring-box 1	3.58	1.48E-06	
	MAPK1	mitogen-activated protein kinase 1	3.44	6.04E-06	
	BMP7	bone morphogenetic protein 7	-3.35	6.55E-05	
	THBS4	thrombospondin 4	-4.97	4.90E-06	
	Wnt	MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	5.47	2.22E-05
		APC	adenomatous polyposis coli	4.68	4.07E-07
		FOSL1	FOS-like antigen 1	4.67	4.92E-03
		TBL1XR1	transducin (beta)-like 1 X-linked receptor 1	4.00	2.71E-05
CSNK2B		casein kinase 2, beta polypeptide	3.73	8.95E-08	
PPP3R1		protein phosphatase 3 (formerly 2B), regulatory subunit B, alpha isoform	3.72	1.82E-04	
RHOA		ras homolog gene family, member A	3.69	1.06E-05	
RBX1		ring-box 1	3.58	1.48E-06	
TCF7L1		transcription factor 7-like 1 (T-cell specific, HMG-box)	3.53	1.42E-04	
CXXC4		CXXC finger 4	3.17	1.36E-03	
MAP3K7		mitogen-activated protein kinase kinase kinase 7	3.11	2.50E-04	
MAPK9		mitogen-activated protein kinase 9	3.10	6.98E-05	
WNT6	wingless-type MMTV integration site family, member 6	-3.33	9.41E-05		
A2B5⁺ High-grade (n=10) vs. A2B5⁺ GPCs (n=8)					
TGF- β	MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	11.58	2.90E-09	
	THBS1	thrombospondin 1	7.95	2.81E-05	
	DCN	decorin	7.59	8.98E-06	
	INHBA	inhibin, beta A	7.53	5.76E-06	
	ID4	inhibitor of DNA binding 4, dominant negative helix-loop-helix protein	7.13	6.34E-06	
	ID1	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	6.55	7.40E-07	
	RBX1	ring-box 1	5.66	2.28E-10	
	PPP2R1A	protein phosphatase 2 (formerly 2A), regulatory subunit A, alpha isoform	5.54	5.19E-09	
	RHOA	ras homolog gene family, member A	4.36	9.80E-08	
	MAPK1	mitogen-activated protein kinase 1	4.26	2.52E-08	
	TGFB1	transforming growth factor, beta 1	4.19	1.12E-06	
	THBS3	thrombospondin 3	3.85	5.24E-08	
	TFDP1	transcription factor Dp-1	3.73	3.13E-06	
	SMAD5	SMAD family member 5	3.57	4.04E-07	
	SP1	Sp1 transcription factor	3.56	1.75E-05	
	SMAD2	SMAD family member 2	3.32	9.83E-06	
	ID2	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	3.27	9.98E-06	
	ID3	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein	3.17	4.41E-06	
	CUL1	cullin 1	3.14	5.06E-08	

Pathway	Gene	Description	Ratio	q-value
A2B5⁺ High-grade (n=10) vs. A2B5⁺ GPCs (n=8) (end)				
TGF- β	THBS2	thrombospondin 2	-3.07	7.32E-08
	BMP7	bone morphogenetic protein 7	-3.21	1.38E-05
Wnt	MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	11.58	2.90E-09
	FOSL1	FOS-like antigen 1	8.14	5.28E-05
	RUVBL1	RuvB-like 1 (E. coli)	7.91	1.42E-09
	RAC2	ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)	7.03	1.91E-05
	SFRP4	secreted frizzled-related protein 4	6.74	1.56E-05
	RBX1	ring-box 1	5.66	2.28E-10
	PPP2R1A	protein phosphatase 2 (formerly 2A), regulatory subunit A, alpha isoform	5.54	5.19E-09
	CSNK2B	casein kinase 2, beta polypeptide	5.40	3.77E-11
	CSNK1E	casein kinase 1, epsilon	5.24	8.51E-09
	TBL1XR1	transducin (beta)-like 1 X-linked receptor 1	5.23	1.30E-07
	TBL1X	transducin (beta)-like 1X-linked	4.86	3.77E-09
	PPP3R1	protein phosphatase 3 (formerly 2B), regulatory subunit B, alpha isoform	4.67	2.44E-06
	RHOA	ras homolog gene family, member A	4.36	9.80E-08
	APC	adenomatous polyposis coli	4.19	8.49E-08
	TCF7L1	transcription factor 7-like 1 (T-cell specific, HMG-box)	4.01	4.71E-06
	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3	3.95	1.03E-07
	MAPK9	mitogen-activated protein kinase 9	3.88	4.34E-07
	CSNK1A1	casein kinase 1, alpha 1	3.84	4.17E-06
	MMP7	matrix metalloproteinase 7 (matrilysin, uterine)	3.72	1.75E-05
	PPP2R5C	protein phosphatase 2, regulatory subunit B', gamma isoform	3.71	2.20E-07
	CTBP1	C-terminal binding protein 1	3.61	6.28E-06
	VANGL1	vang-like 1 (van gogh, Drosophila)	3.43	1.49E-05
	SMAD2	SMAD family member 2	3.32	9.83E-06
	CUL1	cullin 1	3.14	5.06E-08
	PPP3CA	protein phosphatase 3 (formerly 2B), catalytic subunit, alpha isoform	-3.10	5.57E-08
	WNT6	wingless-type MMTV integration site family, member 6	-3.81	2.24E-06
	PRKACB	protein kinase, cAMP-dependent, catalytic, beta	-4.17	4.60E-06
	DAAM2	dishevelled associated activator of morphogenesis 2	-4.18	4.68E-06
	TCF7L2	transcription factor 7-like 2 (T-cell specific, HMG-box)	-4.53	1.32E-05
	PRICKLE1	prickle homolog 1 (Drosophila)	-5.71	4.58E-05
	SFRP1	secreted frizzled-related protein 1	-7.85	2.44E-05

Pathway	Gene	Description	Ratio	q-value
A2B5⁺ High-grade (n=10) vs. A2B5⁺ Low-grade (n=10)				
TGF- β	THBS1	thrombospondin 1	6.96	1.80E-03
	DCN	decorin	4.52	5.80E-03
	TGFB1	transforming growth factor, beta 1	3.10	1.33E-03
	NOG	noggin	-3.17	7.45E-03
Wnt	SFRP4	secreted frizzled-related protein 4	10.16	9.87E-05
	RUVBL1	RuvB-like 1 (E. coli)	4.02	1.90E-04
	VANGL1	vang-like 1 (van gogh, Drosophila)	4.00	2.11E-04
	MMP7	matrix metalloproteinase 7 (matrilysin, uterine)	3.38	1.51E-03
	PRKACB	protein kinase, cAMP-dependent, catalytic, beta	-3.32	1.64E-03
	CXXC4	CXXC finger 4	-5.30	1.96E-04
A2B5⁺ Oligodendroglioma (n=3) vs. A2B5⁺ Astrocytoma (n=3)				
TGF- β	SMAD5	SMAD family member 5	-3.37	5.55E-04
	ID1	inhibitor of DNA binding 1, dominant negative helix-loop-helix protein	-4.22	4.48E-03
	MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	-5.42	1.71E-04
	BMPR1B	bone morphogenetic protein receptor, type IB	-6.60	9.24E-04
Wnt	RUVBL1	RuvB-like 1 (E. coli)	-3.44	1.95E-04
	TBL1X	transducin (beta)-like 1X-linked	-3.59	1.50E-04
	CSNK1A1	casein kinase 1, alpha 1	-3.61	1.65E-03
	NFAT5	nuclear factor of activated T-cells 5, tonicity-responsive	-4.91	4.07E-04
	MYC	v-myc myelocytomatosis viral oncogene homolog (avian)	-5.42	1.71E-04
	CSNK2A1	casein kinase 2, alpha 1 polypeptide	-6.09	7.94E-05
TCF7L1	transcription factor 7-like 1 (T-cell specific, HMG-box)	-7.08	1.86E-05	