

SUPPLEMENTARY TABLES

Supplementary Table S1: PCR primer set sequences and location of the genes selected for qRT-PCR quantification

Gene symbol	Foward primer (5'-3')	Reverse primer (5'-3')	Cytogenetic band
<i>RAB5</i>	TTAGAAAAGCAGCCCCAATG	GTACTTCTGGGAGAGTCCGC	3p24-p22
<i>RAB7</i>	CCTTCAGCAACACTTTCTTCCT	CCGTTTAGTCTCCTCCTCGG	3q21.3
<i>RAB11</i>	GCTCGGCCTCGACAAGTTC	ACTTATACCACTGCGTCTTCCT	8p11.22
<i>GAPDH</i>	AATGAAGGGGTCATTGATGG	AAGGTGAAGGTCGGAGTCAA	12p13
<i>ACTB</i>	GCACCCAGCACAATGAAG	CTTGCTGATCCACATCTGC	7p22
<i>HPRT1</i>	GAACGTCTTGCTCGAGATGTGA	TCCAGCAGGTCAGCAAAGAAT	Xq26.1
<i>BCRP</i>	CCTTCGACGTCAATAACAAGGAT	CCTGCGATGGCGTTCAC	4q22

Supplementary Table S2: Identification of genes in frequently gained/amplified chromosome regions of RAB5 (Chromosome 3 - Cytoband p24.3-p11.1) in metastatic oral squamous cell carcinoma

Chromosome 3 Cytoband p24.3-p11.1	Gene Name
<i>AZI2</i>	5-azacytidine induced 2
<i>CMC1</i>	COX assembly mitochondrial protein homolog (S. cerevisiae)
<i>DAZL</i>	deleted in azoospermia-like
<i>DPH3</i>	DPH3, KTI11 homolog (S. cerevisiae); DPH3B, KTI11 homolog B (S. cerevisiae)
<i>EFHB</i>	EF-hand domain family, member B
<i>EOMES</i>	omesodermin homolog (Xenopus laevis)
<i>GADL1</i>	glutamate decarboxylase-like 1
<i>KAT2B</i>	K(lysine) acetyltransferase 2B
<i>KCNH8</i>	potassium voltage-gated channel, subfamily H (eag-related), member 8
<i>LOC152024</i>	hypothetical LOC152024
<i>LRRC3B</i>	leucine rich repeat containing 3B
<i>NEK10</i>	NIMA (never in mitosis gene a)- related kinase 10
<i>NGLY1</i>	N-glycanase 1
<i>NKIRASI</i>	NFKB inhibitor interacting Ras-like 1
<i>NR1D2</i>	nuclear receptor subfamily 1, group D, member 2
<i>OXNAD1</i>	oxidoreductase NAD-binding domain containing 1
<i>OXSM</i>	3-oxoacyl-ACP synthase, mitochondrial
<i>PLCL2</i>	phospholipase C-like 2
<i>RAB5A</i>	RAB5A, member RAS oncogene family
<i>RARB</i>	retinoic acid receptor, beta
<i>RBMS3</i>	RNA binding motif, single stranded interacting protein
<i>RFTN1</i>	raftlin, lipid raft linker 1
<i>RPL15</i>	ribosomal protein L15 pseudogene 22; ribosomal protein L15 pseudogene 18; ribosomal protein L15 pseudogene 17; ribosomal protein L15 pseudogene 3; ribosomal protein L15 pseudogene 7; ribosomal protein L15
<i>SATB1</i>	SATB homeobox 1
<i>SGOL1</i>	shugoshin-like 1 (S. pombe)
<i>SLC4A7</i>	solute carrier family 4, sodium bicarbonate cotransporter, member 7
<i>STT3B</i>	STT3, subunit of the oligosaccharyltransferase complex, homolog B (S. cerevisiae)
<i>TBC1D5</i>	TBC1 domain family, member 5
<i>TGFBR2</i>	transforming growth factor, beta receptor II (70/80kDa)
<i>THRB</i>	thyroid hormone receptor, beta (erythroblastic leukemia viral (v-erb-a) oncogene homolog 2, avian)
<i>TOP2B</i>	topoisomerase (DNA) II beta 180kDa
<i>UBE2E1</i>	ubiquitin-conjugating enzyme E2E 1 (UBC4/5 homolog, yeast)
<i>UBE2E2</i>	ubiquitin-conjugating enzyme E2E 2 (UBC4/5 homolog, yeast)
<i>VENTXP7</i>	VENT homeobox (Xenopus laevis) pseudogene 7
<i>ZCWPW2</i>	zinc finger, CW type with PWWP domain 2
<i>ZNF385D</i>	zinc finger protein 385D

Supplementary Table S3: Identification of genes in frequently gained/amplified chromosome regions of RAB7 (Chromosome 3 - Cytoband q11.2-q29) in metastatic oral squamous cell carcinoma

Chromosome 3 Cytoband q11.2-q29	Gene Name
<i>ACAD9</i>	acyl-Coenzyme A dehydrogenase family, member 9
<i>C3orf25</i>	chromosome 3 open reading frame 25
<i>C3orf27</i>	chromosome 3 open reading frame 27
<i>C3orf37</i>	chromosome 3 open reading frame 37
<i>C3orf47</i>	chromosome 3 open reading frame 47
<i>CCDC48</i>	coiled-coil domain containing 48
<i>CNBP</i>	CCHC-type zinc finger, nucleic acid binding protein
<i>COPG</i>	coatamer protein complex, subunit gamma
<i>DNAJB8</i>	DnaJ (Hsp40) homolog, subfamily B, member 8
<i>GATA2</i>	GATA binding protein 2
<i>GP9</i>	glycoprotein IX (platelet)
<i>H1FOO</i>	H1 histone family, member O, oocyte-specific
<i>H1FX</i>	H1 histone family, member X
<i>IFT122</i>	intraflagellar transport 122 homolog (Chlamydomonas)
<i>ISY1</i>	ISY1 splicing factor homolog (S. cerevisiae)
<i>KIAA1257</i>	KIAA1257
<i>LOC90246</i>	hypothetical protein LOC90246
<i>MBD4</i>	methyl-CpG binding domain protein 4
<i>PLXND1</i>	plexin D1
<i>RAB43</i>	RAB43, member RAS oncogene family; hypothetical LOC100131426
<i>RAB7A</i>	RAB7A, member RAS oncogene family
<i>RHO</i>	rhodopsin
<i>RPL32P3</i>	ribosomal protein L32 pseudogene 3
<i>RPN1</i>	ribophorin I
<i>SNORA7B</i>	small nucleolar RNA, H/ACA box 7A; small nucleolar RNA, H/ACA box 7B; ribosomal protein L32

Supplementary Table S4: Identification of genes in frequently gained/amplified chromosome regions of RAB11(Chromosome 8 - Cytoband p23.3-p11.1) in metastatic oral squamous cell carcinoma

Chromosome 8 Cytoband p23.3-p11.1	Gene Name
<i>ADRB3</i>	adrenergic, beta-3-, receptor
<i>ASH2L</i>	ash2 (absent, small, or homeotic)-like (Drosophila)
<i>BAG4</i>	BCL2-associated athanogene 4
<i>BRF2</i>	BRF2, subunit of RNA polymerase III transcription initiation factor, BRF1-like
<i>C8orf86</i>	chromosome 8 open reading frame 86
<i>DDHD2</i>	DDHD domain containing 2
<i>EIF4EBP1</i>	eukaryotic translation initiation factor 4E binding protein 1
<i>ERLIN2</i>	ER lipid raft associated 2
<i>FGFR1</i>	fibroblast growth factor receptor 1
<i>GOT1L1</i>	glutamic-oxaloacetic transaminase 1-like 1
<i>GPR124</i>	G protein-coupled receptor 124
<i>LETM2</i>	leucine zipper-EF-hand containing transmembrane protein 2
<i>LOC728024</i>	hCG1640171
<i>LSM1</i>	LSM1 homolog, U6 small nuclear RNA associated (S. cerevisiae)
<i>PPAPDC1B</i>	phosphatidic acid phosphatase type 2 domain containing 1B
<i>PROSC</i>	proline synthetase co-transcribed homolog (bacterial)
<i>RAB11</i>	RAB11 family interacting protein 1 (class I)
<i>RNF5P1</i>	ring finger protein 5; ring finger protein 5 pseudogene 1
<i>STAR</i>	steroidogenic acute regulatory protein
<i>WHSC1L1</i>	Wolf-Hirschhorn syndrome candidate 1-like 1

Supplementary Table S5: Cross-referenced of the 72-RAB cluster genes with list of differentially expressed genes in Oral Squamous Cell Carcinoma, retrieved from the data collected and processed at the NCBI-GEO database (<http://www.ncbi.nlm.nih.gov/geo/>) originated from ten studies reported in the literature. It was considered a $p < 0.05$ as significant. Protein type was classified as GEFs (guanine nucleotide exchange factors), GAPs (GTPase activating proteins) and effector proteins

RAB central	Gene partner	Gene Name	Protein type	¹ Sheu et al. 2013	² Sumino et al. 2013	³ Reis et al. 2011	⁴ Chen et al. 2008	⁵ Ambatipudi et al. 2012	⁶ Estilo et al. 2011	⁷ Sticht et al. 2008	⁸ Ye et al. 2008	⁹ Toruner et al. 2004	¹⁰ O'Donnell et al. 2005
RAB11A	GNB1	Guanine nucleotide binding protein (G protein)	Eff	-0.09		0.06	0.14	12.11	0.81	-0.08	0.24	0.42	
RAB11A	PIK3R1	Phosphoinositide-3-kinase, regulatory subunit 1	GAP	0.89		-0.27	-0.05	8.57	-1.08	-0.48		0.48	
RAB11A	MYO5A	Myosin VA	Eff	-0.53		0.22	0.55	19.57	2.41		0.28	0.65	
RAB11A	RAB11FIP1	RAB11 family interacting protein 1	Eff	0.63		-0.25	-0.14	-11.42		-0.40	-0.15	-1.00	
RAB5A	ALS2CL	ALS2 C-terminal like	GEF	-0.86		-0.41	-0.31	-7.04		81.66	-0.17	-0.86	
RAB5A	RIN1	Ras and Rab interactor 1	GEF	-0.91			0.05	9.01	1.03	0.12	0.03	-0.69	
RAB5A	RIN2	Ras and Rab interactor 2	GEF	-0.13		0.08	0.14		1.37	-7.00	0.16	1.43	
RAB5A	CAV1	Caveolin 1, caveolae protein	Eff	-0.32		0.11	0.29	-37.92	1.09	-0.39	0.12		
RAB5A	PIK3R4	Phosphoinositide-3-kinase, regulatory subunit 4	Eff	-0.67		0.07	0.08		0.50	-0.14	0.04	1.01	
RAB7A	OSBPL1A	Oxysterol binding protein-like 1A	Eff	0.45		-0.13	-0.12	5.19	-0.98	-0.23	-0.12		
RAB7A	PSMA7	Proteasome (prosome, macropain) subunit, alpha type, 7	Eff			0.07	0.06	27.87	-0.38	-0.60	0.20	0.42	
RAB11A	ARHGAP1	Rho gtpase activating protein 1	Eff	-0.23		0.04	0.07		0.76	-1.15	-0.06		
RAB11A	MYO5B	Myosin VB	Eff	0.82		-0.31	-0.31	11.80		0.40	-0.11		
RAB11A	RAB11FIP5	RAB11 family interacting protein 5	Eff	-0.39		0.03	0.10	-23.07		0.08	0.04		
RAB11A	TRPV6	Ransient receptor potential cation channel, subfamily V, member 6	Eff	3.40		-0.05	-0.05	102.14	-1.11		-0.13		
RAB5A	LRRK2	Leucine-rich repeat kinase 2	Eff	1.64		-0.41	-0.45	-17.80		0.20	-0.15		
RAB5A	RUFY1	RUN and FYVE domain containing 1	Eff	0.23		-0.08	-0.09	-15.76		0.24	-0.10		
RAB5A	SDC1	Syndecan 1	Eff	-0.26			-0.06		1.18	-1.15	0.11	-1.32	
RAB5A	ZFYVE20	Zinc finger, FYVE domain containing 20	Eff	0.20		-0.01	-0.03	4.69		0.29	-0.06		
RAB7A	FYCO1	FYVE and coiled-coil domain containing 1	Eff	1.21		-0.21	-0.15	-8.71		-0.10	-0.18		
RAB7A	VPS26A	Vacuolar protein sorting 26	Eff	0.16		-0.03	-0.04	56.49	0.54	0.19			
RAB11A	AKAP10	A kinase (PRKA) anchor protein 10	Eff			0.24	0.11		0.51	-0.20	-0.21		
RAB11A	PSEN1	Presenilin 1	Eff	-0.41		0.06			0.40	0.00	0.08		
RAB11A	PSEN2	Presenilin 2	Eff	0.17			-0.14		-0.83	-0.52	-0.01		

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RAB central	Gene partner	Gene Name	Protein type	¹ Sheu et al. 2013	² Sumino et al. 2013	³ Reis et al. 2011	⁴ Chen et al. 2008	⁵ Ambatipudi et al. 2012	⁶ Estilo et al. 2011	⁷ Sticht et al. 2008	⁸ Ye et al. 2008	⁹ Toruner et al. 2004	¹⁰ O'Donnell et al. 2005
RAB11A	RAB11FIP2	RAB11 family interacting protein 2	Eff	0.22		-0.03	-0.05		-0.51	-0.46			
RAB11A	RAB3IP	RAB3A interacting protein	Eff	-0.11			0.11	-391.29		-0.07	0.18		
RAB11A	SMCHD1	Structural maintenance of chromosomes flexible hinge domain containing 1	Eff			0.07	0.10			0.19	0.08	0.94	
RAB11A	TBXA2R	Thromboxane A2 receptor	Eff	-0.06	-0.57		0.01			-0.03		-0.58	
RAB5A	ALS2	Amyotrophic lateral sclerosis 2	GEF	0.09			0.09	-14.23		0.04	0.09		
RAB5A	GAPVD1	Gtpase activating protein and VPS9 domains 1	GEF	0.15			-0.06		0.59		-0.05	-0.71	
RAB5A	TSC2	Tuberous sclerosis 2	GAP	-0.75				-4.99		-0.11	0.05	1.11	
RAB5A	USP6NL	USP6 N-terminal like	GAP	0.48		-0.21	-0.36	-72.45			-0.23		
RAB5A	AGTR1	Angiotensin II receptor, type 1	Eff	2.90		-0.33		-8.79	-2.91	0.16			
RAB5A	EEA1	Early endosome antigen 1	Eff			-0.12	-0.10	-5.95	-0.58		-0.12		
RAB5A	PIK3C3	Phosphatidylinositol 3-kinase, catalytic subunit type 3	Eff	0.09			-0.03	110.05		-0.05	-0.13		
RAB5A	RABAC1	Rab acceptor 1 (prenylated)	Eff	-0.39		0.10	0.09			-0.26	0.05		
RAB5A	RABEP2	Rabaptin, RAB gtpase binding effector protein 2	Eff	-0.36			-0.09	11.11		-0.09	-0.03		
RAB5A	SDCBP	Syndecan binding protein (syntenin)	Eff	-0.16			0.04	9.28		-0.07		0.75	
RAB5A	VPS11	Vacuolar protein sorting 11	Eff	0.18		-0.08	-0.12			-0.17	-0.09		
RAB7A	VPS29	Vacuolar protein sorting 29	Eff	0.08	0.37	-0.02	0.08			-0.49			
RAB11A	GNG2	Guanine nucleotide binding protein	Eff	0.38			0.01	5.19			-0.11		
RAB11A	PI4KB	Phosphatidylinositol 4-kinase	Eff				-0.01	-33.64			0.04	-0.40	
RAB5A	RIN3	Ras and Rab interactor 3	GEF	-1.08			0.04			-0.30		0.49	
RAB5A	RASA1	RAS p21 protein activator	GAP	-1.39			-0.02		0.61		0.07		
RAB5A	APPL1	Adaptor protein, phosphotyrosine interaction	Eff			-0.22	-0.18	-94.38			-0.23		
RAB5A	OCRL	Oculocerebrorenal syndrome of Lowe	Eff	0.11			0.03		-0.42			-0.20	
RAB5A	PIK3CB	Phosphatidylinositol-4,5-bisphosphate 3-kinase	Eff	0.13			-0.08		-0.44	-0.17			
RAB5A	RABEP1	Rabaptin, RAB gtpase binding effector protein 1	Eff				0.13	-45.61	-0.33		0.06		
RAB7A	RAC1	Ras-related C3 botulinum toxin substrate 1	Eff	-0.52			-0.02		0.74	35.84			

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RAB central	Gene partner	Gene Name	Protein type	¹ Sheu et al. 2013	² Sumino et al. 2013	³ Reis et al. 2011	⁴ Chen et al. 2008	⁵ Ambatipudi et al. 2012	⁶ Estilo et al. 2011	⁷ Sticht et al. 2008	⁸ Ye et al. 2008	⁹ Toruner et al. 2004	¹⁰ O'Donnell et al. 2005
RAB7A	RILP	Rab interacting lysosomal protein	Eff	0.14		-0.09	-0.07	6.30					
RAB11A	ADRB2	Adrenoceptor beta 2, surface	Eff	0.11		-0.25				-4.25			
RAB11A	HOOK1	Hook homolog 1	Eff				-0.06	38.26				-1.49	
RAB11A	PTGIR	Prostaglandin I2 receptor (IP)	Eff	-1.63			0.01			0.01			
RAB11A	RAB11FIP3	RAB11 family interacting protein 3	Eff				0.07			0.21			0.23
RAB5A	RABGEF1	RAB guanine nucleotide exchange factor 1	GEF	0.18				10.34		-0.04			
RAB5A	ANKFY1	Ankyrin repeat and FYVE domain containing 1	Eff	-0.20			0.05			-0.34			
RAB5A	INPP5B	Inositol polyphosphate-5-phosphatase	Eff				-0.01		-0.44		-0.06		
RAB5A	MON1A	MON1 homolog A	Eff			-0.13		6.40		-0.05			
RAB5A	NAE1	NEDD8 activating enzyme E1 subunit 1	Eff					17.91	0.33			0.85	
RAB5A	SUN2	Sad1 and UNC84 domain containing 2	Eff				-0.11		-0.39		-0.09		
RAB7A	VPS39	Vacuolar protein sorting 39 homolog	GEF		-0.53				-0.57	0.19			
RAB7A	RNF115	Ring finger protein 115	Eff				0.05		-0.61			0.64	
RAB7A	VPS35	Vacuolar protein sorting 35	Eff				-0.03	-3.77		-0.18			
RAB11A	TBC1D15	TBC1 domain family, member 15	GAP	0.04			0.03						
RAB11A	DENND5A	DENN/MADD domain containing 5A	Eff				0.11	7.95					
RAB11A	EXOC6	Exocyst complex component 6	Eff	0.68						0.07			
RAB11A	VPS33B	Vacuolar protein sorting 33	Eff	-0.09			-0.08						
RAB11A	ZFYVE27	Zinc finger, FYVE domain containing 27	Eff				0.05			0.27			
RAB5A	TBC1D17	TBC1 domain family, member 17	Eff	-0.27				-14.34					
RAB7A	CCZI	Vacuolar protein trafficking and biogenesis associated	Eff					14.10				-0.44	
RAB7A	PCBP1	Poly(rc) binding protein 1	Eff				-0.03		-0.38				

¹Oncogene (2013)²Int J Cancer(2013)132(3):540–8³BMC Cancer (2011)11:437⁴Cancer Epidemiol Biomarkers Prev (2008)17(8):2152–62⁵Genes Chromosomes Cancer (2012)51(2):161–73⁶BMC Cancer (2009)12–9:11⁷Neoplasia(2008)10(5):462–70⁸BMC Genomics(2008)6–9:69⁹Cancer Genet Cytogenet(2004) 154(1):27–35¹⁰Oncogene (2005)10–24(7):1244–51

Supplementary Table S6: Cross-referenced of the 61-RAB interacting protein obtained from protein-protein interaction databases: MINT (mint.bio.uniroma2.it/mint/), HPRD (www.hprd.org) and IntAct (www.ebi.ac.uk/intact/). The list of differentially expressed genes in Oral Squamous Cell Carcinoma was collected and processed at the NCBI-GEO database (<http://www.ncbi.nlm.nih.gov/geo/>) originated from ten studies reported in the literature. It was considered a $p < 0.05$ as significant

RABcentral	RABs PPI Partner	Gene Name	¹ Sheu et al. 2013	² Sumino et al. 2013	³ Reis et al. 2011	⁴ Chen et al. 2008	⁵ Ambatipudi et al. 2012	⁶ Estilo et al. 2011	⁷ Sticht et al. 2008	⁸ Ye et al. 2008	⁹ Toruner et al. 2004	¹⁰ O'Donnell et al. 2005
RAB5A	ALS2CL	ALS2 C-terminal like	-0.86		-0.41	-0.42	-7.04		0.07	-0.31	-0.86	
RAB11A	FTSJ1	Ftsj RNA methyltransferase homolog 1	-0.16		0.07	0.10		0.54	0.10	0.10		-0.40
RAB5A	PIK3R1	Phosphoinositide-3-kinase, regulatory subunit 1	0.65		-0.27	-0.11	8.57	-1.08	-14.64		0.48	
RAB7A	ATG5	Autophagy related 5			0.05	0.05	12.69	-0.91	-0.08	0.11	0.70	
RAB5A	RIN2	Ras and Rab interactor 2	-0.13		0.08	0.14		1.37	-7.00	0.16	1.43	
RAB11A	MYO5A	Myosin VA	-0.53		0.22	0.55	19.57	2.41		0.28	0.65	
RAB5A	ITGB1	Integrin, beta 1	-0.25			0.12	-81.80	0.92	-0.18	0.18		
RAB5A	RAB5C	RAB5C, member RAS oncogene family	-0.60		0.12	0.12	155.61	0.41	-0.11			
RAB7A	CHM	Choroideremia (Rab escort protein 1)	-0.27		0.06	0.19	4.27	-0.61		0.02		
RAB11A	RAB11FIP1	RAB11 family interacting protein 1 (class I)	0.37		-0.25	-0.30	-11.42		-0.40		-1.00	
RAB5A	RIN1	Ras and Rab interactor 1	-0.91			0.05	9.01	1.03	0.12		-0.69	
RAB11A	PPP2R1B	Protein phosphatase 2, regulatory subunit A, beta	0.57			-0.04		0.84	-0.09			0.37
RAB7A	HLA-B	Major histocompatibility complex, class I, B			0.09	0.13	-7.88		-0.58		2.19	
RAB5A	SDCBP	Syndecan binding protein (syntenin)	-0.16			0.04	9.28		-0.07		0.75	
RAB11A	RAB11FIP2	RAB11 family interacting protein 2 (class I)	0.22		-0.03	-0.05		-0.51	-0.46			
RAB5A	CHML	Choroideremia-like (Rab escort protein 2)			0.24	0.10	10.70		0.35			0.65
RAB7A	GABARAPL2	GABA(A) receptor-associated protein-like 2	0.29			-0.04	-44.30	-0.36			0.43	
RAB5A	USP6NL	USP6 N-terminal like	0.48		-0.21	-0.74	-72.45			-0.23		
RAB7A	EIF1B	Eukaryotic translation initiation factor 1B	0.17		-0.06		4.77	-0.36	-0.31			
RAB5A	ALS2	Amyotrophic lateral sclerosis 2 (juvenile)	0.09			0.09	-14.23		0.04	0.09		
RAB11A	GDI2	GDP dissociation inhibitor 2	0.05	0.29		-0.02		0.56	-0.16			
RAB11A	TBXA2R	Thromboxane A2 receptor	-0.89	-0.57		-0.02			-0.03		-0.58	
RAB7A	MPG	N-methylpurine-DNA glycosylase	-0.62	0.30		0.04	66.04		0.07			
RAB5A	ZFYVE20	Zinc finger, FYVE domain containing 20	0.20		-0.01	-0.12	4.69		0.14			
RAB11A	RAB11FIP5	RAB11 family interacting protein 5 (class I)	-0.39		0.03	0.10	-23.07		0.08			
RAB11A	MYO5B	Myosin VB	0.82		-0.31	-0.46	11.80		-2.42			
RAB5A	AGTR1	Angiotensin II receptor, type 1	2.90		-0.33		-8.79	-2.91	0.16			

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RABcentral	RABs PPI Partner	Gene Name	¹ Sheu et al. 2013	² Sumino et al. 2013	³ Reis et al. 2011	⁴ Chen et al. 2008	⁵ Ambatipudi et al. 2012	⁶ Estilo et al. 2011	⁷ Sticht et al. 2008	⁸ Ye et al. 2008	⁹ Toruner et al. 2004	¹⁰ O'Donnell et al. 2005
RAB5A	OCRL	Oculocerebrorenal syndrome of Lowe	0.11			0.03		-0.42			-0.20	
RAB11A	PPP2R1A	Protein phosphatase 2, regulatory subunit A, alpha		0.32		-0.04		0.42	-0.18			
RAB7A	RILP	Rab interacting lysosomal protein	0.14		-0.09	-0.07	6.30					
RAB5A	TSC2	Tuberous sclerosis 2	-0.75				-4.99		-0.11		1.11	
RAB5A	RAB37	RAB37, member RAS oncogene family	0.90		0.00		15.14		-0.19			
RAB11A	TRAF6	TNF receptor-associated factor 6	0.19			-0.08	-7.91		0.27			
RAB5A	EEA1	Early endosome antigen 1			-0.12	-0.11	-5.95	-0.58				
RAB11A	PSEN2	Presenilin 2 (Alzheimer disease 4)	0.17			-0.14		-0.83	-0.52			
RAB5A	RABAC1	Rab acceptor 1 (prenylated)	-0.39		0.10	0.09			-0.26			
RAB5A	TM9SF4	Transmembrane 9 superfamily protein member 4			0.10	0.09		0.62	0.05			
RAB11A	ME2	Malic enzyme 2, NAD(+)-dependent, mitochondrial				0.08	12.98		0.06		1.27	
RAB7A	GABARAPL1	GABA(A) receptor-associated protein like 1	0.30					-1.23	-0.24		1.54	
RAB5A	GDI1	GDP dissociation inhibitor 1	-0.36		0.08	0.10	-3.02					
RAB11A	VPS24	(CHMP3)charged multivesicular body protein 3	0.12		-0.04	-0.10			-1.58			
RAB11A	STX4	Syntaxin 4			0.06	0.06	-1.82	0.31				
RAB11A	RABGGTB	Rab geranylgeranyltransferase, beta subunit	0.40		-0.03	-0.03	-17.75					
RAB11A	PSEN1	Presenilin 1	-0.59		0.06			0.40	-0.35			
RAB7A	DNM2	Dynamain 2	-0.29			-0.06			0.08			
RAB11A	VHL	Von Hippel-Lindau tumor suppressor	-0.32					-0.62	-0.02			
RAB11A	CHMP1B	Charged multivesicular body protein 1B			0.07	0.04	-18.39					
RAB5A	VPS45	Vacuolar protein sorting 45 homolog				-0.03		-0.63			0.78	
RAB7A	RNF115	Ring finger protein 115				-0.01		-0.61			0.64	
RAB5A	RABEP1	Rabaptin, RAB gtpase binding effector protein 1				0.10	-45.61	-0.33				
RAB7A	ATG9A	Autophagy related 9A	-0.86					-0.26	-0.04			
RAB7A	SH3KBP1	SH3-domain kinase binding protein 1	-0.19			0.22			0.08			
RAB5A	APPL1	Adaptor protein, phosphotyrosine interaction			-0.22	-0.22	-94.38					
RAB11A	DTNBP1	Dystrobrevin binding protein 1	-0.29			0.09			-0.08			
RAB5A	RASA1	RAS p21 protein activator	-1.39			-0.02		0.61				
RAB11A	RAB11FIP3	RAB11 family interacting protein 3				0.06			-0.06			0.23
RAB5A	VPS35	Vacuolar protein sorting 35				-0.05	-3.77		-0.18			
RAB7A	SLC2A4	Solute carrier family 2	0.15				36.28	-1.83				

(Continued)

RABcentral	RABs PPI Partner	Gene Name	¹ Sheu et al. 2013	² Sumino et al. 2013	³ Reis et al. 2011	⁴ Chen et al. 2008	⁵ Ambatipudi et al. 2012	⁶ Estilo et al. 2011	⁷ Sticht et al. 2008	⁸ Ye et al. 2008	⁹ Toruner et al. 2004	¹⁰ O'Donnell et al. 2005
<i>RAB7A</i>	<i>MCC</i>	Mutated in colorectal cancers	-0.21			0.17						
<i>RAB11A</i>	<i>ZFYVE27</i>	Zinc finger, FYVE domain containing 27				0.05			0.10			
<i>RAB7A</i>	<i>PRKAB1</i>	Protein kinase, AMP-activated, beta 1 non-catalytic subunit				-0.15			-0.09			

¹Oncogene (2013)

²Int J Cancer(2013)132(3):540–8

³BMC Cancer (2011)11:437

⁴Cancer Epidemiol Biomarkers Prev (2008)17(8):2152–62

⁵Genes Chromosomes Cancer (2012)51(2):161–73

⁶BMC Cancer (2009)12–9:11

⁷Neoplasia(2008)10(5):462–70

⁸BMC Genomics(2008)6–9:69

⁹Cancer Genet Cytogenet(2004) 154(1):27–35

¹⁰Oncogene (2005)10–24(7):1244–51