

Receptor mediated signal transduction			
Gene	Accession #	Description	GO Function
RIPK4	NM_020639	Receptor-interacting serine/threonine kinase 4	signal transduction, protein phosphorylation, PKC associated NFkB activation
KCIP-1	NM_003406	protein kinase C inhibitor protein-1	anti-apoptosis/signal transduction/PKC signaling
MAP2K4	NM_003010	Mitogen activated kinase kinase 4	Jnk kinase pathway/protein phosphorylation/signal transduction
EIF4EBP2	NM_004096	Translation initiation factor 4E binding protein 2	cAMP mediated signaling/insulin receptor signaling
KHDRBS1	NM_006559	KH domain, RNA binding, signal transduction associated 1	G2/M transition/cell cycle control/cell proliferation/receptor linked signaling
TMEMPAI	NM_020182	Transmembrane, prostate androgen induced	androgen receptor signaling
TNFRSF21	NM_014452	Transforming Growth Factor superfamily 21	signal transduction/apoptosis/androgen receptor signaling
PTK2	NM_153831	Protein tyrosine kinase 2 / FRNK	Integrin mediated signaling/protein phosphorylation
ITGA2	NM_002203	Integrin alpha 2	cell adhesion, cell matrix adhesion, integrin mediated signaling
PCDH7	NM_032456	Protocadherin 7	cell adhesion
PCDH9	NM_203487	Protocadherin 9	cell adhesion
PCDHGC3	NM_002588	Protocadherin gamma C	cell-cell adhesion
ITGB8	NM_002214	Integrin beta 8	cell adhesion, cell matrix adhesion, integrin mediated signaling
FN1	NM_212482	Fibronectin	cell adhesion, cell migration, wound healing, receptor tyrosine kinase signaling
ANK1	NM_020476	Ankryn1	cell motility, cell polarity, signal transduction
ARL4C	NM_005737	ADP ribosylation factor-like	small GTPase signaling
INS-IGF2	NR_003512	Insulin like growth factor 2	insulin like growth factor
TGFB1	NM_000358	Transforming Growth Factor Beta induced	cell adhesion, cell proliferation
TNC	NM_002160	Tenascin C	cell adhesion, signal transduction
BOC	NM_033254	Brother of CDO(cell adhesion down regulated by oncogenes)	cell adhesion, myoblast differentiation
NPAS2	NM_002518	neuronal PAS domain 2	transcriptional regulation/signal transduction
SORCS2	NM_020777	Sortilin-related VPS10 domain containing receptor 2	neuropeptide signaling pathways
SRPX	NM_006307	Sushi repeat containing protein x-linked	cell adhesion
NR2F1	NM_005654	Nuclear receptor 2F1	CNS development/neuron migration/signal transduction/transcriptional regulation
ARRB1	NM_020251	Arrestin beta 1	signal transduction
TGM2	NM_004613	Transglutaminase 2	cell adhesion/protein crosslinking/apoptosis
SPAN1	NM_005727	Tetraspanin 1	cell adhesion/signal transduction/cell motility/cell proliferation
PRICKLE1	NM_153026	Prickle1 homolog	signaling regulation
TNFSF5IP1	NM_020232	Proteasome assembly chaperone 2	proteasome assembly
HNT	NM_016522	Neurotrimin	cell adhesion/neuron recognition
FOXO4	NM_005938	Forkhead Bbox O4	transcriptional regulation/insulin receptor signaling/cell cycle arrest

Brain/CNS associated genes			
ANK1	NM_020476	Ankryn1	cell motility, cell polarity, signal transduction
MAP2	NM_002374	Microtubule associated protein 2	brain inhibition of microtubule depolymerization
PCDH7	NM_032456	Protocadherin 7	cell adhesion
TMEM158	NM_015444	Ras induced senescence 1	Ras induced senescence
PCDH9	NM_203487	Protocadherin 9	cell adhesion
CCNA1	NM_003914	Cyclin A1	cell cycle
NPAS2	NM_002518	neuronal PAS domain 2	transcriptional regulation/signal transduction
CBLN2	NM_182511	Cerebellin 2 precursor	neuromodulation
ENC1	NM_003633	Ectodermal neural cortex	CNS development
SORCS2	NM_020777	Sortilin-related VPS10 domain containing receptor 2	neuropeptide signaling pathways
SRPX	NM_006307	Sushi repeat containing protein x-linked	cell adhesion
SEMA3E	NM_012431	Semaphorin 3E	CNS development/cell motility/cell differentiation
SEMA3A	NM_006080	Semaphorin 3A	CNS development/cell differentiation
NR2F1	NM_005654	Nuclear receptor 2F1	CNS development/neuron migration/signal transduction/transcriptional regulation
FOXP2	NM_148899	Forkhead box P2	CNS development/transcriptional regulation
MEF2C	NM_002397	Myocyte enhancer factor 2C	muscle development/nervous system development/transcriptional regulation
PRICKLE1	NM_153026	Prickle1 homolog	signaling regulation
PTK2	NM_153831	Protein tyrosine kinase 2 / FRNK	Integrin mediated signaling/protein phosphorylation
PCDHGC3	NM_002588	Protocadherin gamma C	cell-cell adhesion
RTN3	NM_006054	Reticulon 3	apoptosis/stress response/vesicle mediated transport
KCIP-1	NM_003406	Protein kinase C inhibitor protein-1	anti-apoptosis/signal transduction/PKC signaling
HNT	NM_016522	Neurotrimin	cell adhesion/neuron recognition

Putative CREB target genes (Have conserved CRE, or bind CREB in ChIP on Chip)			
			<b>bold</b> = conserved CRE and high CREB binding score
<b>RIPK4</b>	NM_020639	Receptor-interacting serine/threonine kinase 4	signal transduction, protein phosphorylation, PKC associated NFkB activation
<b>NR2F1</b>	NM_005654	Nuclear receptor 2F1	CNS development/neuron migration/signal transduction/transcriptional regulation
<b>FOXP2</b>	NM_148899	Forkhead box P2	CNS development/transcriptional regulation
<b>TM9SF2</b>	NM_004800	Transmembrane 9 superfamily 2	transport
<b>TADA3L</b>	NM_006354	Transcriptional adapter 3-like	transcriptional regulation/p53 mediated apoptosis
KCIP-1	NM_003406	protein kinase C inhibitor protein-1	anti-apoptosis/signal transduction/PKC signaling
PCDH7	NM_032456	Protocadherin 7	cell adhesion
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TNFSF5IP1	NM_020232	Proteasome assembly chaperone 2	proteasome assembly
NR2F1	NM_005654	Nuclear receptor 2F1	CNS development/neuron migration/signal transduction/transcriptional regulation
MAEA	NM_001017405	Macrophage erythroblast attacher	cell cycle/cell division/apoptosis/cell adhesion
RNF182	NM_152737	Ring finger protein 182	metal ion binding
FDFT1	NM_004462	farnesyl-diphosphate farnesyltransferase 1	cholesterol/isoprenoid synthesis
MAP2K4	NM_003010	Mitogen activated kinase kinase 4	Jnk kinase pathway/protein phosphorylation/signal transduction
KHDRBS1	NM_006559	KH domain, RNA binding, signal transduction associated 1	G2/M transition/cell cycle control/cell proliferation/receptor linked signaling
TNFRSF21	NM_014452	Transforming Growth Factor superfamily 21	signal transduction/apoptosis/androgen receptor signaling
PTPRO	NM_000667	Protein tyrosine phosphatase receptor type O	protein dephosphorylation
PPME1	NM_016147	Protein phosphatase methyltransferase 1	amino acid demethylation-PP2A
XRCC5	NM_021141	X-ray repair complementing defective repair in CHO cells	double strand break repair/NHEJ
LGMN	NM_005606	Legumain	proteolysis

Supplementary Table S1. Genes that were differentially expressed with RGS17 knockdown and genes identified by an analysis of 6 published array datasets as co-expressed with RGS17 in lung tumors were classified based on function by searching the Gene Ontology Annotation from the European Bioinformatics Institute (<http://www.ebi.ac.uk/GOA/>) and evaluated as putative CREB responsive genes using the Salk Institute CREB Target Database. Genes falling into the prevalent functional categories are presented.