

## Product datasheet for **TR501233**

### Arhgef2 Mouse shRNA Plasmid (Locus ID 16800)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Arhgef2 Mouse shRNA Plasmid (Locus ID 16800)
Locus ID:	16800
Synonyms:	AA408978; GEF; GEF-H1; GEFH1; Lbcl1; Lfc; LFP40; mKIAA0651; P40
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Arhgef2 - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 16800). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">BC006589</a> , <a href="#">NM_001198911</a> , <a href="#">NM_001198912</a> , <a href="#">NM_001198913</a> , <a href="#">NM_008487</a> , <a href="#">NM_008487.1</a> , <a href="#">NM_008487.2</a> , <a href="#">NM_008487.3</a> , <a href="#">NM_001198913.1</a> , <a href="#">NM_001198912.1</a> , <a href="#">NM_001198911.1</a> , <a href="#">NM_001198911.2</a> , <a href="#">NM_001198913.2</a> , <a href="#">NM_001198912.2</a>
UniProt ID:	<a href="#">Q60875</a>



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<b>Summary:</b>	<p>Activates Rho-GTPases by promoting the exchange of GDP for GTP. May be involved in epithelial barrier permeability, cell motility and polarization, dendritic spine morphology, antigen presentation, leukemic cell differentiation, cell cycle regulation, innate immune response, and cancer. Binds Rac-GTPases, but does not seem to promote nucleotide exchange activity toward Rac-GTPases. May stimulate instead the cortical activity of Rac. Inactive toward CDC42, TC10, or Ras-GTPases. Forms an intracellular sensing system along with NOD1 for the detection of microbial effectors during cell invasion by pathogens. Involved in innate immune signaling transduction pathway promoting cytokine IL6/interleukin-6 and TNF-alpha secretion in macrophage upon stimulation by bacterial peptidoglycans; acts as a signaling intermediate between NOD2 receptor and RIPK2 kinase. Contributes to the tyrosine phosphorylation of RIPK2 through Src tyrosine kinase leading to NF-kappaB activation by NOD2. Overexpression activates Rho-, but not Rac-GTPases, and increases paracellular permeability (By similarity). Involved in neuronal progenitor cell division and differentiation (PubMed:28453519). Involved in the migration of precerebellar neurons (PubMed:28453519). [UniProtKB/Swiss-Prot Function]</p>
<b>shRNA Design:</b>	<p>These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact <a href="mailto:techsupport@origene.com">techsupport@origene.com</a>. If you need a special design or shRNA sequence, please utilize our <a href="#">custom shRNA service</a>.</p>
<b>Performance Guaranteed:</b>	<p>OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.</p> <p>For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at <a href="mailto:techsupport@origene.com">techsupport@origene.com</a>. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).</p>