

Product datasheet for **TR700904**

Emp2 Rat shRNA Plasmid (Locus ID 360468)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Emp2 Rat shRNA Plasmid (Locus ID 360468)
Locus ID:	360468
Synonyms:	EMP-2
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Emp2 - Rat, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 360468). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	NM_001007721 , NM_001007721.1 , BC081865
UniProt ID:	Q66HH2



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Summary:	<p>Functions as a key regulator of cell membrane composition by regulating proteins surface expression. Also, plays a role in regulation of processes including cell migration, cell proliferation, cell contraction and cell adhesion. Negatively regulates caveolae formation by reducing CAV1 expression and CAV1 amount by increasing lysosomal degradation. Facilitates surface trafficking and the formation of lipid rafts bearing GPI-anchor proteins. Regulates surface expression of MHC1 and ICAM1 proteins increasing susceptibility to T-cell mediated cytotoxicity. Regulates the plasma membrane expression of the integrin heterodimers ITGA6-ITGB1, ITGA5-ITGB3 and ITGA5-ITGB1 resulting in modulation of cell-matrix adhesion. Also regulates many processes through PTK2. Regulates blood vessel endothelial cell migration and angiogenesis by regulating VEGF protein expression through PTK2 activation. Regulates cell migration and cell contraction through PTK2 and SRC activation. Regulates focal adhesion density, F-actin conformation and cell adhesion capacity through interaction with PTK2. Positively regulates cell proliferation. Plays a role during cell death and cell blebbing. Promotes angiogenesis and vasculogenesis through induction of VEGFA via a HIF1A-dependent pathway. Also plays a role in embryo implantation by regulating surface trafficking of integrin heterodimer ITGA5-ITGB3. May play a role in glomerular filtration. [UniProtKB/Swiss-Prot Function]</p>
shRNA Design:	<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 techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.</p>
Performance Guaranteed:	<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 techsupport@origene.com. 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>