

## Product datasheet for **TR519724**

### Gcn1l1 Mouse shRNA Plasmid (Locus ID 231659)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Gcn1l1 Mouse shRNA Plasmid (Locus ID 231659)
Locus ID:	231659
Synonyms:	4932409G22; AL022764; G431004K08Rik; Gcn1; GCN1L; mKIAA0219
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Gcn1l1 - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 231659). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">NM_172719</a> , <a href="#">NM_172719.1</a> , <a href="#">NM_172719.2</a> , <a href="#">BC150735</a> , <a href="#">BC038407</a> , <a href="#">BC056933</a> , <a href="#">BC068244</a> , <a href="#">BC082548</a>
UniProt ID:	<a href="#">E9PVA8</a>
Summary:	Acts as a positive activator of the GCN2 protein kinase activity in response to amino acid starvation (PubMed:15937339). Forms a complex with EIF2AK4/GCN2 on translating ribosomes; during this process, GCN1 seems to act as a chaperone to facilitate delivery of uncharged tRNAs that enter the A site of ribosomes to the tRNA-binding domain of EIF2AK4/GCN2, and hence stimulating EIF2AK4/GCN2 kinase activity (By similarity). Participates in the repression of global protein synthesis and in gene-specific mRNA translation activation, such as the transcriptional activator ATF4, by promoting the EIF2AK4/GCN2-mediated phosphorylation of eukaryotic translation initiation factor 2 (eIF-2-α/EIF2S1) on 'Ser-52', and hence allowing ATF4-mediated reprogramming of amino acid biosynthetic gene expression to alleviate nutrient depletion (PubMed:24333428). [UniProtKB/Swiss-Prot Function]
shRNA Design:	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> .


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**Performance  
Guaranteed:**

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.

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](mailto: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).