

## Product datasheet for **TR509559**

### Acer2 Mouse shRNA Plasmid (Locus ID 230379)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Acer2 Mouse shRNA Plasmid (Locus ID 230379)
Locus ID:	230379
Synonyms:	2410116I05Rik; Asah3l; CRG-L1; maCER2
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Acer2 - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 230379). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">BC059819</a> , <a href="#">NM_001290541</a> , <a href="#">NM_001290543</a> , <a href="#">NM_139306</a> , <a href="#">NM_139306.1</a> , <a href="#">NM_139306.2</a> , <a href="#">NM_139306.3</a> , <a href="#">NM_001290543.1</a> , <a href="#">NM_001290541.1</a> , <a href="#">BC023423</a> , <a href="#">BC051923</a> , <a href="#">BC060063</a> , <a href="#">BC061463</a>
UniProt ID:	<a href="#">Q8VD53</a>



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**Summary:**

Golgi ceramidase that catalyzes the hydrolysis of ceramides into sphingoid bases like sphingosine and free fatty acids at alkaline pH (PubMed:29401619). Ceramides, sphingosine, and its phosphorylated form sphingosine-1-phosphate are bioactive lipids that mediate cellular signaling pathways regulating several biological processes including cell proliferation, apoptosis and differentiation (PubMed:29401619). Has a better catalytic efficiency towards unsaturated long-chain ceramides, including C18:1-, C20:1- and C24:1-ceramides (By similarity) (PubMed:29401619). Saturated long-chain ceramides and unsaturated very long-chain ceramides are also good substrates, whereas saturated very long-chain ceramides and short-chain ceramides are poor substrates. Also hydrolyzes dihydroceramides to produce dihydrosphingosine (By similarity). It is the ceramidase that controls the levels of circulating sphingosine-1-phosphate and dihydrosphingosine-1-phosphate in plasma through their production by hematopoietic cells (PubMed:29401619). Regulates cell proliferation, autophagy and apoptosis by the production of sphingosine and sphingosine-1-phosphate. As part of a p53/TP53-dependent pathway, promotes for instance autophagy and apoptosis in response to DNA damage. Through the production of sphingosine, may also regulate the function of the Golgi complex and regulate the glycosylation of proteins (By similarity). [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 [techsupport@origene.com](mailto:techsupport@origene.com). If you need a special design or shRNA sequence, please utilize our [custom shRNA service](#).

**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).