

## Product datasheet for TR511534

### Grin2b Mouse shRNA Plasmid (Locus ID 14812)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Grin2b Mouse shRNA Plasmid (Locus ID 14812)
Locus ID:	14812
Synonyms:	AW490526; GluN2B; Nmdar2b; NR2B
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Grin2b - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 14812). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">NM_008171</a> , <a href="#">NM_008171.1</a> , <a href="#">NM_008171.2</a> , <a href="#">NM_008171.3</a> , <a href="#">BC172745</a> , <a href="#">NM_001363750</a> , <a href="#">NM_008171.4</a>
UniProt ID:	<a href="#">Q01097</a>
Summary:	Component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Channel activation requires binding of the neurotransmitter glutamate to the epsilon subunit, glycine binding to the zeta subunit, plus membrane depolarization to eliminate channel inhibition by Mg(2+) (PubMed:1377365, PubMed:26912815). Sensitivity to glutamate and channel kinetics depend on the subunit composition (PubMed:1377365). In concert with DAPK1 at extrasynaptic sites, acts as a central mediator for stroke damage. Its phosphorylation at Ser-1303 by DAPK1 enhances synaptic NMDA receptor channel activity inducing injurious Ca <sup>2+</sup> influx through them, resulting in an irreversible neuronal death (PubMed:20141836). Contributes to neural pattern formation in the developing brain (PubMed:8789948). Plays a role in long-term depression (LTD) of hippocampus membrane currents and in synaptic plasticity (PubMed:8789948).[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> .



**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).