

## Product datasheet for **TR512313**

### Agrn Mouse shRNA Plasmid (Locus ID 11603)

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | shRNA Plasmids   |
| Product Name:             | Agrn Mouse shRNA Plasmid (Locus ID 11603)  |
| Locus ID:                 | 11603  |
| Synonyms:                 | Agrin; nmf380  |
| Vector:                   | pRS (TR20003)  |
| E. coli Selection:        | Ampicillin   |
| Mammalian Cell Selection: | Puromycin  |
| Format:                   | Retroviral plasmids  |
| Components:               | Agrn - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 11603). 5µg purified plasmid DNA per construct<br>29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.   |
| RefSeq:                   | <a href="#">NM_021604</a> , <a href="#">NM_021604.1</a> , <a href="#">NM_021604.2</a> , <a href="#">NM_021604.3</a> , <a href="#">BC150703</a> , <a href="#">BC004020</a> , <a href="#">BC028992</a> , <a href="#">BC043318</a> , <a href="#">BC058651</a> , <a href="#">BC059259</a> , <a href="#">BC064021</a> , <a href="#">BC094010</a> , <a href="#">NM_001369026</a> , <a href="#">NM_001369027</a>  |
| Summary:                  | Isoform 1: heparan sulfate basal lamina glycoprotein that plays a central role in the formation and the maintenance of the neuromuscular junction (NMJ) and directs key events in postsynaptic differentiation. This neuron-specific (z+) isoform is a component of the AGRN-LRP4 receptor complex that induces the phosphorylation and activation of MUSK. The activation of MUSK in myotubes induces the formation of NMJ by regulating different processes including the transcription of specific genes and the clustering of AChR in the postsynaptic membrane. Calcium ions are required for maximal AChR clustering. AGRN function in neurons is highly regulated by alternative splicing, glycan binding and proteolytic processing. Modulates calcium ion homeostasis in neurons, specifically by inducing an increase in cytoplasmic calcium ions. Functions differentially in the central nervous system (CNS) by inhibiting the alpha(3)-subtype of Na <sup>+</sup> /K <sup>+</sup> -ATPase and evoking depolarization at CNS synapses. This transmembrane agrin (TM-agrin) isoform, the predominate form in neurons of the brain, induces dendritic filopodia and synapse formation in mature hippocampal neurons in large part due to the attached glycosaminoglycan chains and the action of Rho-family GTPases.[UniProtKB/Swiss-Prot Function] |



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- 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).