

## Product datasheet for **TR512489**

### Rnf2 Mouse shRNA Plasmid (Locus ID 19821)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Rnf2 Mouse shRNA Plasmid (Locus ID 19821)
Locus ID:	19821
Synonyms:	AI326319; AI450156; AU019207; dinG; Ring1B
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Rnf2 - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 19821). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">BC020122</a> , <a href="#">NM_011277</a> , <a href="#">NM_001360844</a> , <a href="#">NM_011277.1</a> , <a href="#">NM_011277.2</a> , <a href="#">NM_001360845</a> , <a href="#">NM_001360847</a> , <a href="#">NM_011277.3</a>
UniProt ID:	<a href="#">Q9CQJ4</a>



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**Summary:**

E3 ubiquitin-protein ligase that mediates monoubiquitination of 'Lys-119' of histone H2A (H2AK119Ub), thereby playing a central role in histone code and gene regulation (PubMed:15525528, PubMed:22325148, PubMed:28596365). H2AK119Ub gives a specific tag for epigenetic transcriptional repression and participates in X chromosome inactivation of female mammals (PubMed:15525528, PubMed:28596365). May be involved in the initiation of both imprinted and random X inactivation (PubMed:15525528). Essential component of a Polycomb group (PcG) multiprotein PRC1-like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development (PubMed:22325148, PubMed:16710298). PcG PRC1 complex acts via chromatin remodeling and modification of histones, rendering chromatin heritably changed in its expressibility (PubMed:15525528, PubMed:22325148, PubMed:16710298). E3 ubiquitin-protein ligase activity is enhanced by BMI1/PCGF4 (PubMed:16710298). Acts as the main E3 ubiquitin ligase on histone H2A of the PRC1 complex, while RING1 may rather act as a modulator of RNF2/RING2 activity (PubMed:15525528, PubMed:16710298). Plays a role in the transcriptional repression of genes that are required for pluripotency in embryonic stem cells, thereby contributing to differentiation of the ectodermal and endodermal germ layers (PubMed:22226355). Association with the chromosomal DNA is cell-cycle dependent. In resting B- and T-lymphocytes, interaction with AURKB leads to block its activity, thereby maintaining transcription in resting lymphocytes (PubMed:24034696).[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).