

## Product datasheet for **TL706584**

### RGD1307704 Rat shRNA Plasmid (Locus ID 314300)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	RGD1307704 Rat shRNA Plasmid (Locus ID 314300)
Locus ID:	314300
Synonyms:	No66; RGD1307704
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	RGD1307704 - Rat, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 314300). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	<a href="#">NM_001108040</a> , <a href="#">NM_001108040.1</a>
UniProt ID:	<a href="#">D3ZU57</a>
Summary:	Oxygenase that can act as both a histone lysine demethylase and a ribosomal histidine hydroxylase. Specifically demethylates 'Lys-4' (H3K4me) and 'Lys-36' (H3K36me) of histone H3, thereby playing a central role in histone code. Preferentially demethylates trimethylated H3 'Lys-4' (H3K4me3) and monomethylated H3 'Lys-4' (H3K4me1) residues, while it has weaker activity for dimethylated H3 'Lys-36' (H3K36me2). Also catalyzes the hydroxylation of 60S ribosomal protein L8 on 'His-216'. Acts as a regulator of osteoblast differentiation via its interaction with SP7/OSX by demethylating H3K4me and H3K36me, thereby inhibiting SP7/OSX-mediated promoter activation. May also play a role in ribosome biogenesis and in the replication or remodeling of certain heterochromatic region. Participates in MYC-induced transcriptional activation (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 <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).