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Product datasheet for TL508593

Rc3h1 Mouse shRNA Plasmid (Locus ID 381305)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Rc3h1 Mouse shRNA Plasmid (Locus ID 381305)
Locus ID:	381305
Synonyms:	5730557L09Rik; Gm551; mKIAA2025; N28103
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	Rc3h1 - Mouse, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 381305). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	NM_001024952, NM_001024952.1, NM_001024952.2, BC138663, BC152931
UniProt ID:	Q4VGL6

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Summary:

Post-transcriptional repressor of mRNAs containing a conserved stem loop motif, called constitutive decay element (CDE), which is often located in the 3' UTR, as in HMGXB3, ICOS, IER3, NFKBID, NFKBIZ, PPP1R10, TNF, TNFRSF4 and in many more mRNAs (PubMed:23663784, PubMed:25026077, PubMed:18172933). Cleaves translationally inactive mRNAs harboring a stem-loop (SL), often located in their 3' UTRs, during the early phase of inflammation in a helicase UPF1-independent manner (PubMed:26000482). Binds to CDE and promotes mRNA deadenylation and degradation. This process does not involve miRNAs (PubMed:20412057, PubMed:20639877). In follicular helper T (Tfh) cells, represses of ICOS and TNFRSF4/Ox40 expression, thus preventing spontaneous Tfh cell differentiation, germinal center B-cell differentiation in the absence of immunization and autoimmunity. In resting or LPS-stimulated macrophages, controls inflammation by suppressing TNF expression. Also recognizes CDE in its own mRNA and in that of paralogous RC3H2, possibly leading to feedback loop regulation (PubMed:23583642, PubMed:23583643, PubMed:15917799). Inhibits cooperatively with ZC3H12A the differentiation of helper T cells Th17 in lungs. They repress target mRNA encoding the Th17 cell-promoting factors IL6, ICOS, REL, IRF4, NFKBID and NFKBIZ. The cooperation requires RNA-binding by RC3H1 and the nuclease activity of ZC3H12A (PubMed:25282160). Recognizes and binds mRNAs containing a hexaloop stem-loop motif, called alternative decay element (ADE) (PubMed:27010430). Able to interact with double-stranded RNA (By similarity). miRNA-binding protein that regulates microRNA homeostasis. Enhances DICER-mediated processing of pre-MIR146a but reduces mature MIR146a levels through an increase of 3' end uridylation. Both inhibits ICOS mRNA expression and they may act together to exert the suppression (PubMed:25697406). Acts as a ubiquitin E3 ligase. Pairs with E2 enzymes UBE2A, UBE2B, UBE2D2, UBE2F, UBE2G1, UBE2G2 and UBE2L3 and produces polyubiquitin chains. Show the strongest activity when paired with UBE2N:UBE2V1 or UBE2N:UBE2V2 E2 complexes and generate both short and long polyubiquitin chains (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. 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. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).