

## Product datasheet for **TL706997**

### Tppp Rat shRNA Plasmid (Locus ID 361466)

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | shRNA Plasmids  |
| Product Name:             | Tppp Rat shRNA Plasmid (Locus ID 361466)  |
| Locus ID:                 | 361466  |
| Synonyms:                 | RGD1310121  |
| Vector:                   | pGFP-C-shLenti (TR30023)  |
| E. coli Selection:        | Chloramphenicol (34 ug/ml)  |
| Mammalian Cell Selection: | Puromycin   |
| Format:                   | Lentiviral plasmids   |
| Components:               | Tppp - Rat, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 361466). 5µg purified plasmid DNA per construct<br>29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free. |
| RefSeq:                   | <a href="#">NM_001108461</a> , <a href="#">NM_001108461.1</a>   |
| UniProt ID:               | <a href="#">D3ZQL7</a>  |



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|--------------------------------|--|
| <b>Summary:</b>                | <p>Regulator of microtubule dynamics that plays a key role in myelination by promoting elongation of the myelin sheath (PubMed:19606501). Acts as a microtubule nucleation factor in oligodendrocytes: specifically localizes to the postsynaptic Golgi apparatus region, also named Golgi outpost, and promotes microtubule nucleation, an important step for elongation of the myelin sheath (By similarity). Required for both uniform polarized growth of distal microtubules as well as directing the branching of proximal processes (By similarity). Shows magnesium-dependent GTPase activity; the role of the GTPase activity is unclear (By similarity). In addition to microtubule nucleation activity, also involved in microtubule bundling and stabilization of existing microtubules, thereby maintaining the integrity of the microtubule network (By similarity). Regulates microtubule dynamics by promoting tubulin acetylation: acts by inhibiting the tubulin deacetylase activity of HDAC6 (By similarity). Also regulates cell migration: phosphorylation by ROCK1 inhibits interaction with HDAC6, resulting in increased acetylation of tubulin and increased cell motility (By similarity). Plays a role in cell proliferation by regulating the G1/S-phase transition (By similarity). Involved in astral microtubule organization and mitotic spindle orientation during early stage of mitosis; this process is regulated by phosphorylation by LIMK2 (By similarity).[UniProtKB/Swiss-Prot Function]</p> |
| <b>shRNA Design:</b>           | <p>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>.</p>  |
| <b>Performance Guaranteed:</b> | <p>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.</p> <p>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 <a href="mailto:techsupport@origene.com">techsupport@origene.com</a>. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).</p>  |