

Product datasheet for **TL301925**

ROBO3 Human shRNA Plasmid Kit (Locus ID 64221)

Product data:

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| Product Type: | shRNA Plasmids |
| Product Name: | ROBO3 Human shRNA Plasmid Kit (Locus ID 64221) |
| Locus ID: | 64221 |
| Synonyms: | HGPPS; HGPPS1; HGPS; RBIG1; RIG1 |
| Vector: | pGFP-C-shLenti (TR30023) |
| E. coli Selection: | Chloramphenicol (34 ug/ml) |
| Mammalian Cell Selection: | Puromycin |
| Format: | Lentiviral plasmids |
| Components: | ROBO3 - Human, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 64221). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free. |
| RefSeq: | NM_022370 , NM_022370.1 , NM_022370.2 , NM_022370.3 , BC008623 , BC086878 , BC113744 , BC148593 , NM_001370358 , NM_001370357 , NM_001370361 , NM_001370364 , NM_001370366 , NR_163413 , NM_001370356 , NM_001370359 , NR_163409 , NR_163410 , NR_163411 , NR_163412 , NR_163414 , NR_163415 , NM_022370.4 |
| UniProt ID: | Q96MS0 |



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Summary:

This gene is a member of the Roundabout (ROBO) gene family that controls neurite outgrowth, growth cone guidance, and axon fasciculation. ROBO proteins are a subfamily of the immunoglobulin transmembrane receptor superfamily. SLIT proteins 1-3, a family of secreted chemorepellants, are ligands for ROBO proteins and SLIT/ROBO interactions regulate myogenesis, leukocyte migration, kidney morphogenesis, angiogenesis, and vasculogenesis in addition to neurogenesis. This gene, ROBO3, has a putative extracellular domain with five immunoglobulin (Ig)-like loops and three fibronectin (Fn) type III motifs, a transmembrane segment, and a cytoplasmic tail with three conserved signaling motifs: CC0, CC2, and CC3 (CC for conserved cytoplasmic). Unlike other ROBO family members, ROBO3 lacks motif CC1. The ROBO3 gene regulates axonal navigation at the ventral midline of the neural tube. In mouse, loss of Robo3 results in a complete failure of commissural axons to cross the midline throughout the spinal cord and the hindbrain. Mutations ROBO3 result in horizontal gaze palsy with progressive scoliosis (HGPPS); an autosomal recessive disorder characterized by congenital absence of horizontal gaze, progressive scoliosis, and failure of the corticospinal and somatosensory axon tracts to cross the midline in the medulla. [provided by RefSeq, May 2019]

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).