

## Product datasheet for **SC308726**

### ROBO3 (NM\_022370) Human Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** ROBO3 (NM\_022370) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** ROBO3  
**Synonyms:** HGPPS; HGPPS1; HGPS; RBIG1; RIG1  
**Mammalian Cell Selection:** None  
**Vector:** [pCMV6-XL5](#)  
**E. coli Selection:** Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_022370 edited  
GGAGAGAAGGACGAGGGAAGGAGGGCACGAAGAGGCACCGTACCCAGGCGCAC  
CGGCAGGAGAGCGGCACCGTGGCTGCCGACGCGCAGAGGCTGTGGAGGGGCTTACGGC  
TCCCAGCCACGGGTCTCAGACCCAGGGGCTGGGCCCCAGCCCCAGTCCCATCCCAG  
CTGGGTGC: AGCCATGCTGCGCTACCTGCTGAAAACGCTGCTGCAGATGAACTTGTTCGC  
GGACTCTCTGGCCGGGACATCTCCAACCTCCAGCGAGCTGCTCTTGGGCTTCAACTCCTC  
GCTGGCGGCGCTCAACCACACCTGCTGCCTCCCGGCGATCCCTCTCAACGGGTCAAG  
GGTAGGACCGGAGGACGCTATGCCCGCATCGTGGAGCAGCCGCCAGATCTGCTGGTCTC  
CCGAGGCGAGCCCGCCACGTTGCCCTGCCGCGTGAAGGCCGACCCCGACCCAACATTGA  
GTGGTACAAGAACGGGGCGGTGTGCCACTGTGCGGGAGGATCCGCGTGCACCGCCT  
GCTGCTGCCAGCGGCGCCTCTTCTTCCGCGCATCGTGCACGGGCGCCGCGCGGGCC  
GGACGAAGGTGTCTACACTTGCCTGGCTCGCAACTACCTGGGGCAGCAGCGAGCAGAAA  
CGCCTCGCTGGAAGTGGCAGTCCCTCCGTGATGATTTCCGGCAGTCTCTGGAAACGTGGT  
GGTGGCAGTGGGGAGCCAGCAGTACTGGAATGCGTGCCCCCGCGGCCACCCGGAGCC  
TTCCGTGTCTGGAGGAAGGACGGTGCAAGACTCAAGGAAGAGGAAGGAAGGATCACGAT  
CCGTGGAGGGAAGCTGATGATGTACATACACTCAAGAGCGATGCAGGCATGTATGTGTG  
CGTAGCCTCCAACATGGCGGGAGAACGGGAGAGTGCAGGAGTGAAGTCACTGGTACTGGA  
GGTCCCCTCATTCTGCGCAGACCAGTGAATCAGGTGGTCTGGTGTATGCCCTGTGAC  
TTTCTATGTGAGGTGAAGGGGATCCCCACCTCGTCTACGCTGGCGCAAGGAGGATGG  
GGAAC TGCCACAGGCAGGTATGAGATCCGGAGTGACCACAGCCTTTGGATTGGGCATGT  
GAGTGCCGAAGATGAGGGAACGTACACCTGTGTGGCGGAGAACAGTGTGGGCCGCGCTGA  
AGCATCTGGTCCCTCAGTGTTACGTCCACCCAGTTGGTGACCCAGCCCGAGGACCA  
GATGGCAGCTCCTGGAGAGAGCGTGGCTTTCCAGTGCGAGACCAAGGAAACCCCCACC  
TGCCATCTTCTGGCAGAAGGAGGGGAGTCAGGTCTGCTTTTCCCAGTCAGTCACTTCA  
GCCGACGGGGCGTCTCAGTGTCTCAAGAGGCCAACTTAACATCACCGCGGTGCAGCG  
TGGGGATGCTGGTACTACGTGTGCCAGGCTGTGAGTGGCTGGCAGCATCCTGGCCAA  
GGCCCTGCTGGAGATAAAAGGAGCCTTTGGATGGGCTGCCTCTGTCATCCTCCAGGG



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ACCAGCCAATCAGACGCTGGTGCTTGGCTCCTCCGTGTGGCTGCCCTGCAGAGTGACTGG  
 GAACCCTCAACCCAGTGTCCGATGGAAGAAGGATGGGCAGTGGCTGCAGGGGGATGACCT  
 CCAGTTCAAGACAATGGCCAACGGTACCCTGTACATCGCCAATGTGCAGGAGATGGACAT  
 GGGCTTCTACAGCTGCGTGGCCAAGAGTCCACAGGGGAAGCCACATGGAGCGGCTGGCT  
 TAAGATGCGGGAAGACTGGGGAGTATCACCAGACCCCCCTACAGAACCCAGTCCCCTCC  
 GGGGGCTCCCTCTCAGCCAGTGGTCACTGAGATCACCAAGAACAGCATTACCTGACCTG  
 GAAGCCCAACCCACAACTGGGGCTGCAGTACGCTTTATGTGATAGAGGCCTTCAGCC  
 AGCAGCTGGCAACACATGGCGTACTGTGGCAGATGGCGTGCAGCTGGAGACACACAGT  
 CAGCGGTCTGCAGCCCAATACCATCTACCTGTTTCTGGTTCGAGCAGTGGGAGCCTGGGG  
 CCTCAGTGAGCCAGCCCGTCTCTGAGCCTGTCCGTACACAGGATAGCAGCCCTCTAG  
 GCCAGTGGAGGCCATGGAGAGGCCAGCAGGGACTGGCGGAAGTGGCTGTGCGCCTGCA  
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 CGCCCCCTACTCATGGCTGGCAGATTCTGGCCCCACCCATCTCGAAGCCCTCGGCCCA  
 GGAACCCAGGGGAAGCTGCTGCCCTAGCAATCCTGACCCGGACGACAGATAWTASRRGA  
 AGCGGGAATCTCCCTGTATCTAGCTCAGACGGCCAGGGGCAGGGCCGCCCTGGCAGGG  
 TCCTGTCTATAGCACCATTGACCCAGCGGGGAGGAGCTGCAGACCTCCATGGGGCTT  
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 CCAGGGGACAGTGGAGCCAAGGAGGCAAAGTGAAGCTTCTGGGGAAACCTGTGCAGAT  
 GCCTCTCTGAACTGGCCAGAAGCCCTGCCCCACCTCCTCCTTCTTGTGAACTGAGCTG  
 CCTAGAAGGGCCGGAGGAGGAGCTGGAGGGCAGCTCAGAGCCAGAGGAGTGGTGGCCGCC  
 AATGCCYAGAGAAGTCACTGACGGAGCCAGCTCCAGTGGAGGGTGCCTGGTCACCCC  
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 TACACCCTCACCTCCTGACCCTCCCCAGCCCCAACTGACATGCCCCATCTCCATCAGAT  
 GCCCAGGAGGGTGCCCTTGGGCCGAGTCCCCCTCAGTGTATCCAGCCCATGCTGGG  
 CATCCGTGAAGCGAGGCCTGTGGCTTGGGTGTGGCCCTGCAGCCTACCCACCTCAG  
 CCCAGTCTGCCCTAGCACAGCCAGCAGTCCCCAGGCAGAACCTGGCAGGGGATGG  
 GGAGATGACTCCCCACTTCAAGGACCCCGTGTCTGATTCCGGAAGAAACCAAGGCTCT  
 TCCTACAGGAGGGAGAACAGTCTGGGACTTGGCCCCACCACCTTGGCACCGCCAGA  
 GGAAGAGGCGAGCTGGGCCCTAGAGCTGAGGGCAGCAGGCAGCATGCTCCTCCCTGGAGCG  
 GGAGCGCAGTGGGGAGAGGAAAGCGGTCCAGGCCGTGCCCTGGCAGCCAGCGGTGCT  
 CCACCCAGATGAAGAGGCTGGCTCCCATACAGCAGACCAAGCTTCTGTCCCGGGGCCA  
 GGGCACAGCACATGTTCCAGGCCGGCAGCAACTTCCAGGGGCTCCAGCAGCTCTAG  
 GGGCTCCCGGGCCCTGGCCGGAGCCGGAGTCGGAGTCAGAGCCGGAGCCAGAGCCAAAG  
 GCCAGGACAGAAACGCCGAGAGGAACCAAGATGACCTTGTGGGGCATTGAGAATATCA  
 TGAGTGCCACGGGAAGGGGAGTAGGGATGTCTTTCCCCCCCCAGCAGTATGAGTGGG  
 GCTAGCTGAAGCCATTGGTTTCCACGATTTCAATTGGCTGAGAAGGCAGAGAGTAGCT  
 CCTCCCTTTCTTTCTTTTCCACCTGAGACTTGTTTATAAAAAACAAAACAATAAAAAAGA  
 GTCTGATCAGA

<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_022370 unedited GTCGTATTTGTAACGACTCATATAGGCGGCCGCGNAATCGCCCTTGTGAGCCTGCTGC GCTACCTGCTGAAAACGCTGCTGCAGATGAACTTGTTCGCGGACTCTCTGGCCGGGGACA TCTCCAACCTCCAGCGAGCTGCTCTTGGGCTTCAACTCCTCGTGGCGGCGCTCAACCACA CCCTGTGCCTCCCGGCGATCCCTCTCTCAACGGGTCAAGGTAGGACCGGAGGACGCTA TGCCCCGCATCGTGGAGCAGCCGCCAGATCTGCTGGTCTCCCGAGGCGAGCCCGCCACGT TGCCCTGCCGCGCTGAAGGCCGACCCCGACCCAACATTGAGTGGTACAAGAACGGGGCGC GTGTGGCCACTGTGCGGGAGGATCCGCGTGCACCGCCTGCTGCTGCCAGCGGCGCC TCTTCTCCCGCATCGTGCACGGGCGCCGCGCGGCCGACGAAGGTGTCTACACTT GCGTGGCTCGCAACTACCTGGGGCAGCAGCGAGCAGAAACGCCTCGCTGGAAGTGGCAG TCCTCCGTGATGATTTCCGGCAGTCTCCTGAAACGTGGTGGTGGCAGTGGGGAGCCAG CAGTACTGGAATGCGTGCCCCCGCGGCCACCCGAGCCTTCCGTGTCTGNNAGAAAG ACGGTGCCAGACTCAAGGAAGAGGAAGGAAAGATCACGATCCGTGGAGGGAAGCTGATGA TGTCACATACACTCAAGAGCGATGCAAGCATGTATGTGTGCGTAGCCTCCAACATGGCGG GAGAAACGGGAAATGCGGCAACTGAAGTCTGGTACTGGAACGTCCCTAATCCTG
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_022370
<b>Insert Size:</b>	4200 bp
<b>OTI Disclaimer:</b>	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.  The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a>
<b>OTI Annotation:</b>	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
<b>Components:</b>	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_022370.2</a> , <a href="#">NP_071765.2</a>

RefSeq Size: 4569 bp

RefSeq ORF: 4554 bp

Locus ID: 64221

UniProt ID: [Q96MS0](#)

Cytogenetics: 11q24.2

Protein Families: Druggable Genome

Protein Pathways: Axon guidance

**Gene 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]  
Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a).