

Product datasheet for **RG224282**

ROBO2 (NM_002942) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ROBO2 (NM_002942) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ROBO2
Synonyms:	SAX3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG224282 representing NM_002942 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGAGTCTGCTGATGTTACACAACACTGCTCTGTGGATTTTTATATGTTCCGGTTGATGGATCGCGTCTTCGCCAGGAGGACTTTCCCCCGCGGATTGTGGAGCATCCTCCGATGTCATCGTCTCTAAGGGCGAGCCACGACTCTGAAGTCAAGGCGGAGGGCCGCCAACGCCACCATTGAGTGGTACAAAGATGGGGAGCGAGTGAGACTGACAAGGACGATCCCGGTCCACAGGATGCTTCTGCCAGCGGATCCTTATTCTTCTTGC GCATCGTGACCGGCGCAGGAGTAAACCTGATGAAGGAAGCTACGTTTGTGTTGCGAGGAACTATCTTGG TGAAGCAGTGAGTCGAAATGCGTCTCTGGAAGTGGCATTGTTACGAGATGACTTCCGACAAAACCCACAGATGTTGTAGTGCCAGCTGCAATCCTGGAGTGCCAGCCTCCCGGGGACACCCAGAACCCACCATCTACTGGAAAAAGACAAAGTTTCAATTGATGACAAGGAAGAAAGAATAAGTATCCGTGGTGGAAA ACTGATGATCTCCAATACCAGGAAAAGTATGATGCAGGGATGTATACTTGTGTTGGTACCAATATGGTGGGA GAAAGGGACAGTGACCCAGCAGAGCTGACTGTCTTTGAACGACCCACATTTCTCAGGAGGCCAATTAACC AGGTGGTACTGGAGGAAGAAGCTGTAGAATTTGTTGTCAAGTCCAAGGAGATCCTCAACCACTGTGAG GTGGAAAAAGGATGATGCAGACTTGCCAAGAGGAAGGTATGACATCAAAGACGATTACACACTAAGAATT AAAAAGACCATGAGTACAGATGAAGGCACCTATATGTATTGCTGAGAATCGGGTTGAAAAAATGGAAG CCTCTGCTACACTCACCGTCCGAGCTCCCCACAGTTTGTGGTTCCGGCCAAGAGATCAGATTGTTGCTCA AGGTGCAACAGTGACATTTCCCTGTGAAACTAAAGGAAACCCACAGCCAGCTGTTTTTGGCAGAAAGAA GGCAGCCAGAACCTACTTTTCCCAAACCAACCCAGCAGCCAACAGTAGATGCTCAGTGTACCAACTG GAGACCTCACAATCACCAACATTCAACGTTCCGACGCGGGTACTACATCTGCCAGGCTTTAACTGTGGC AGGAAGCATTTTAGCAAAAGCTCAACTGGAGGTTACTGATGTTTTGACAGATAGACTCCACCTATAATT CTACAAGGCCAGCCAACCAACGCTGGCAGTGGATGGTACAGCGTTACTGAAATGTAAGCCACTGGTG ATCCTCTTCTGTAATTAGCTGGTTAAAGGAGGATTTACTTTTCCGGTAGAGATCCAAGAGCAACAAT TCAAGAGCAAGGCACACTGCAGATTAAGAATTTACGGATTTCTGATACTGGCACTTATACTGTGTGGCT



[View online »](#)

ACAAGTTC AAGTGGAGAGACTTCCTGGAGTGCAGTGTGGATGTGACAGAGTCTGGAGCAACAATCAGTA
AAAACATGATTTAAGTGACCTGCCAGGGCCACATCCAAACCGCAGGTCACTGATGTTACTAAGAACAG
TGTCACCTTGTCTGGCAGCCAGGTACCCTGGAAACCCTCCAGCAAGTGCATATATCATTGAGGCTTTC
AGCCAATCAGTGAGCAACAGCTGGCAGACCCTGGCAAACCATGTAAGACCACCCCTCTATACTGTAAGAG
GACTGCGGCCAATAACAATCTACTTATTCATGGTCAGAGCGATCAACCCCAAGGTCTCAGTGACCCAAG
TCCCATGT CAGATCCTGTGCGCACACAAGATATCAGCCCACCAGCACAAGGAGTGGACCACAGGCAAGTG
CAGAAAGAGCTAGGAGATGTCCCTTGTCCGCTTTCATAATCCAGTTGTGCTGACTCCCACCACGGTTCAGG
TCACATGGACGGTTGATCGCCAACCCAGTTTATCCAAGGCTACCGAGTGATGTATCGTCAGACTTCAGG
TCTGCAGGCGACATCTTCGTGGCAGAATTTAGATGCCAAAGTCCCAGTGAACGAAGTGCTGCTTAGTC
AACCTGAAAAAGGGGTGACTTATGAAATTAAGTACGGCCATATTTAATGAGTCCAAGGAATGGATA
GTGAATCTAAAACGGTTCGTAATACTGAAGAAGCCCAAGTCCCCACCACAGTCTGTCAGTGTACTGAC
AGTTGGAAGCTACAATAGCACAAGTATTAGTGTTCCTGGGATCCTCCTCCAGATCACCAGAATGGA
ATTATCCAAGAATAACAAGATCTGGTGTCTAGGAAATGAAACGCGATTCCATATCAACAAAACGTGGATG
CAGCCATTCGGTCCGTAATAATTGGTGGATTATCCCAGGTATCAATACCGGTAGAGGTTGCAGCTAG
TACCAGTGCAGGGGTTGGAGTAAAGAGTGAGCCACAGCCAATAATAATCGGGAGACGCAATGAAGTTGTC
ATTACTGAAAACAATAACAGCATAACTGAGCAAATCACTGATGTGGTGAAGCAACCAGCCTTTATAGCTG
GTATTGGTGGTGCCTGCTGGGTAATTCTGATGGGTTTTAGCATATGGTTGTATTGGCGAAGAAAAGAGAG
GAAGGGACTCAGTAATTAATGCTGTTACGTTTCAAAGAGGAGATGGAGGACTAATGAGCAATGGAAGCCGT
CCAGGTCTTCTCAATGCTGGTGTATCCCAGCTATCCATGGCTTGTGATTCTTGGCCAGCCACGAGCTTGC
CAGTAAATAATAGCAACAGTGGCCCAAATGAGATTGGAATTTTGGCCGTGGAGATGTGCTGCCACCAGT
TCCAGGCCAAGGGGATAAAAACAGCAACGATGCTCTCAGATGGAGCCATTTATAGTAGCATTGACTTCACT
ACCAAAACCAGTTACAACAGTTCAGCCAAATAACACAGGCTACCCCATATGCCACGACACAGACTTTCG
ATTCCAACAGCATACATGAATTGGTGTGATCTGCCTGATCCACAATGGAAAAGCTCAATTGAGCAAAA
AACAGATCTGATGGGATTTGGTTATTCTCTACCTGATCAGAACAAGGTAACAATGGTGGAAAAGGTGGA
AAAAAGAAGAAAAATAAAAACTTCTCTAAACCACAGAAAAACAATGGATCCACTTGGGCCAATGTCCCTC
TACCTCCCCCCCCAGTCCAGCCCCTTCTGGCACGGAGCTGGAACACTATGCAGTGAACAACAAGAAAA
TGGCTATGACAGTGATAGCTGGTGGCCACCATTGCCAGTACAACTTACTTACACCAAGGTCTGGAAGAT
GAACTGGAAGAAGATGATGATAGGGTCCCAACACCTCCTGTTGAGGGCTGGCTTCTTCTCCTGCTATCT
CCTTTGGACAGCAGTCCACTGCAACTCTTACTCCATCCCCACGGGAAGAGATGCAACCCATGCTGCAGGC
TCACCTGGATGAGTTGACAAGAGCCTATCAGTTTGATATAGCAAAACAACATGGCACATTCAAAGCAAT
AATCAACCTCCACAGCCTCCAGTTCACCGTTAGGTTATGTGTCTGGAGCCTTGATTTCTGATTTGGAAA
CGGATGTTGCAGATGATGATGCCGACGACGAAGAGGAAGCTTTAGAAATCCCCAGGCCCTGAGAGCACT
GGACCAGACTCCTGGATCCAGCATGGACAATCTAGACAGCTCTGTGACAGGAAAAGCCTTTACCTCCTCT
CAAAGACCTCGACCTACCAGCCATTTTCTACTGACAGTAACACCAGTGCAGCCCTGAGTCAAAGTCAGA
GGCCTCGGCCACTAAAAACACAAGGGAGGGCGGATGGACCAACAACCAGCATTGCCTCATCGAAGGGA
AGGAATGACAGATGAGGAGGCCTTGGTGGCCTATAGCAAGCCAGTTTCCCATCTCCAGGTGGCCACAGC
TCATCAGGAACAGCTTCTTAAGGGATCCACTGGACCTAGGAAAACCGAGGTGTTGAGAGCAGGCCACC
AGCGCAATGCCAGCGACCTTCTTGACATAGGATATATGGGCTCCAACAGTCAAGGACAGTTTACAGGTGA
ATTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG224282 representing NM_002942
 Red=Cloning site Green=Tags(s)

```
MSLLMFTQLLLCGFLYVRVDGSRLRQEDFPPRIVEHPSDVIIVSKGEP TLLNCKAEGRPTPTIEWYK DGER
VETDKDDPRSHRMLLPSGSLFFLRIVHGRRSKPDEGSYVCVARNYLGEAVSRNASLEVALLRDDFRQNP T
DVVVAAGEPAILECQPPRGHPEPTIYWKDKVRI DDKEERISIRGGKLMISNTRKSDAGMYTCVGTNMVG
ERDSDPAELTVFERPTFLRRPINQVVL EEEAVEFR CQVQGDQPQTVRWKKDDADLPRGRYDIKDDYTLRI
KKTMTDDEGTMCIAENRVGKMEASATLTVRAPPQFVVRPRDQIVAQGRVTVP CETKGNPQPAVFWQKE
GSQNLLFPNQPPQNSRCSVSPTGDLTITNIQRSDAGY IICQALTVAGSILAKAQLEVTVLDRPPPII
LQGPANQTLAVDGTALLKCKATGDPLPVISWLKEGFTFPGRDP RATIOEQGT LQIKNLRISDTGTYTCVA
TSSSGETSWSAVLDVTESGATISKNYDLSDLP GPPSKPQVTDVTKNSVTL SWQPGTGPLPASAYIEAF
SQSVSNWQTVANHVKTTLTYVRGLRPNTIYLFMVRAINPQGLSDPSPMSDPVRTQDISPPAQGVDRHQV
QKELGDVLRVLRHNPVVLTPTTVQVTWTVDRQPQFIQGYRVMYRQTSGLQATSSWQNLDAKVPTERSAVLV
NLKKGVTYEIKVRPYFNEFQGMDESEKTVRTTEEAPSAPPQSVTLTVGSYNSTISVSWDPPPPDHQNG
IIQEYKIWCLGNETRFHINKTVDAAIRSVIIGGLFPGIQYRVEVAASTSAGVGKSEPQPIIIGRRNEVV
ITENNSITEQITDVVKQPAFIAGIGGACWVILMGFSIWLYWRRKKR KGLSNYAVTFQRGDGGLMSNGSR
PGLLNAGDPSYPWLADSWPATSLPVNNSNSGPN EIGNFGRGDVLPVPGQDKTATMLSDGAIYSSIDFT
TKTSYNSSSQITQATPYATTQILHSNSIHELAVDL PDPQWKSSIQQKTDLMGFGYSLPDQNKGNNGGKGG
KKKKNKNSKPKQKNNGSTWANVPLPPPPVQPLPGTELEHYAVEQQENGYSDSWCPPLPVQTYLHQGLD
ELEEDDRVPTPPVVRGVASSPAISFGQQTATLTPSPREEMQ PMLQAHLDELTRAYQFDIAKQTWHIQSN
NQPPQPPVPLGYVSGALISDLETDVADDDADDEEEA EI PRPLRALDQTPGSSMDNLDSSVTGKAFTSS
QRPRPTSPFSTDSNTSAALSQSQRPRPTKKHKGGRMDQQPALPHRREGMTDEEALVPYSPKSFPSPGGHS
SSGTASSKGSTGPRKTEVLRAGHQ RNASDLLDIGYMG SNSQGQFTGEL
```

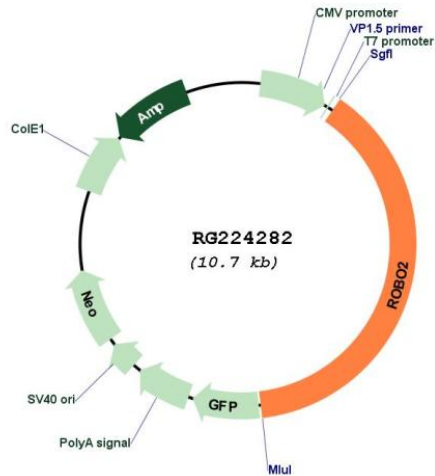
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_002942

ORF Size: 4134 bp

OTI Disclaimer: 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. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: 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).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
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.

RefSeq: [NM_002942.5](#)

RefSeq Size: 8689 bp

RefSeq ORF: 4137 bp

Locus ID: 6092

UniProt ID: [Q9HCK4](#)

Cytogenetics:	3p12.3
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Axon guidance
Gene Summary:	<p>The protein encoded by this gene belongs to the ROBO family, part of the immunoglobulin superfamily of proteins that are highly conserved from fly to human. The encoded protein is a transmembrane receptor for the slit homolog 2 protein and functions in axon guidance and cell migration. Mutations in this gene are associated with vesicoureteral reflux, characterized by the backward flow of urine from the bladder into the ureters or the kidney. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2014]</p>