

Product datasheet for **RG234813**

TRAK1 (NM_001265608) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TRAK1 (NM_001265608) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TRAK1
Synonyms:	EIEE68; MILT1; OIP106
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG234813 representing NM_001265608
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCATTGGTTTTTCAATTCGGGCAGCCCGTCAGGGCTCAGCCTCTGCCAGGACTCTGCCACGGCAAGC
 TCATTCGGACAAAACGCCTGTGATGTGTGCAACAGCACCGATCTTCGGAAAGTCGAGATCATTAGCCTGCT
 GGAGGAGCAGCTGCCCCATTATAAGTTAAGAGCCGACACCATCTACGGTTATGACCACGACGACTGGCTC
 CATAACCTCTCATTCTCCAGATGCCAACATTGACCTCACAAACCGAGCAAATTGAAGAGACGTTAAAT
 ACTTCTTTTTATGTGCTGAAAGAGTTGGCCAGATGACTAAGACATATAATGACATAGATGCTGCTACTCG
 GCTTCTTGAGGAGAAAGAGCGGGATTTAGAATTGGCCGCTCGCATCGCCAGTCGTTGTTGAAGAAGAAC
 AAGACCCTAACCGAGAGGAACGAGCTGCTGGAGGAGCAGGTGGAACACATCAGGGAGGAGGTGTCTCAGC
 TCCGGCATGAGCTGTCCATGAAGGATGAGCTGCTTCAGTTCTACACCAGCGCTCGGAGGAGAGTGAGCC
 CGAGTCCGTTTGCTCAACCCCGTTGAAGAGGAATGAGTCGTCCTCCTCAGTCCAGAATTACTTTTCAATTTG
 GATTCTCTTCAAAGAAGCTGAAAGACCTTGAAGAGGAGAATGTTGTACTTCGATCCGAGGCCAGCCAGC
 TGAAGACAGAGACCATCACCTATGAGGAGAAGGAGCAGCAGCTGGTCAATGACTGCGTGAAGGAGCTGAG
 GGATGCCAATGTCCAGATTGCTAGTATCTCAGAGGAACGGCCAAGAAGACGGAAGATGCTGCCCGCCAG
 CAAGAGGAGATCACACACCTGCTATCGCAAATAGTTGATTTGCAGAAAAAGGCAAAAGCTTGCGCAGTGG
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 TGGCAGAGAGATTGAGGGAACGATGCGCAAGGAGCTGCAGTTGGAAGAGGCCGAGTCTCCAGACATCAC
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 GGCATGTCTTACAGCAGCCGCTCCTACCTGCCTGAGAAGCTCCAGATCGTGAAGCCGCTGGAAGGTTCCG
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 GGTCAACAAGGGCTTCCGGACGCTGGATGTTGACCTGGACGAAGTGTACTGCCTTAACGACTTTGAAGAA
 GATGACACAGGTGACCACATTTCTCTCCACGCCTAGCTACCTCCACTCCAGTTCAGCACCCAGAGACCT
 CAGGTGAGAGGTCCCAAGCACGTGTGACTGTCTCAGGCAGCAGAAGTTACCCGAGCCGGCCTCAGGCTTC
 CCCAGAGGAGATGCAGGAGCCGCCAGCGGCCACGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGTTCT
 GGTGAGGGCACCACGATAAGTCTGTAACTTGGCACCTTCCCGGAGGCAGAGTTTTGGGCCATTCTCA
 CCTCTGTTCCAGGCACCATCCGTAGTGGTCTCTGTCTGTAGCTTCCGCTCGTCTGTGTGGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG234813 representing NM_001265608
 Red=Cloning site Green=Tags(s)

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MALVFQFGQPVRAQPLPGLCHGKLI RTNACDVCNSTDLPEVEIISLLEEQLPHYKLRADTIYGYDHDWL
HTPLISPDANIDL TTEQIEETLKYFLLCAERVGQMTKTYNDIDAVTRLLEEKERDLELAARIGQSLLKKN
KTLTERNELLEEQVEHIREEVSQLRHEL SMKDELLQFYTSAAEESEPEVCSTPLKRNESSSSVQNYFHL
DSLQKCLKDLEEENNVLRSEASQLKTETIYEEKEQQLVNDCKELRDANVQIASISEELAKKTEDAARQ
QEEITHLLSQIYDLQKKAKACAVENEELVQHLGAAKDAQRQLTAELRELEDKYAECMEMLHEAQEELKNL
RNKTMPNTTSRRYHSLGLFPMDSLAAEIEGTMRKELQLEEAESPDITHQKRVFETVRNINQVVKQSLTP
SPMNIPGSNQSSAMNLLSSCVSTPRSSFYGSDIGNVVLDNKTNSIILETEAADLGNDERSKKPGTPGTP
GSHDLETALRRLSLRRENYL SERRFFEEEQERKLQELA EK GELRSGSLTPTESIMSLGTHSRFSEFTGFS
GMSFSSRSYLPEKLQIVKPLEGSATLHHWQQLAQPHLGGILDPRPGVVTKGFRTLDVDLDEVYCLNDFEE
DDTGDHISLPRLATSTPVQHPETSGERSQARVTVSGSRSYPSRPQASPEEMQEPAAEEEEEEEEEGS
GEGTTISPVNLA PFPEAEFWAILTSVPGTIRSGLSVASARLCG
  
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001265608

ORF Size: 2232 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_001265608.2](#)

RefSeq Size: 4820 bp

RefSeq ORF: 2235 bp

Locus ID: 22906

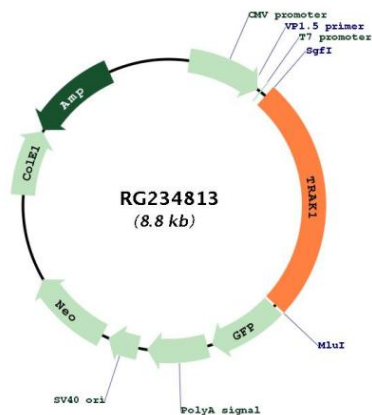
UniProt ID: [Q9UPV9](#)

Cytogenetics: 3p22.1

Protein Families: Transcription Factors

Gene Summary: Involved in the regulation of endosome-to-lysosome trafficking, including endocytic trafficking of EGF-EGFR complexes and GABA-A receptors (PubMed:18675823). Involved in mitochondrial motility. When O-glycosylated, abolishes mitochondrial motility. Crucial for recruiting OGT to the mitochondrial surface of neuronal processes (PubMed:24995978). TRAK1 and RHOT form an essential protein complex that links KIF5 to mitochondria for light chain-independent, anterograde transport of mitochondria (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG234813