

## Product datasheet for **RG234425**

### **TRAK1 (NM\_001265610) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	TRAK1 (NM_001265610) 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:**

>RG234425 representing NM\_001265610  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCAGAAATTTATCGAAGCGGATTATTATGAACTAGACTGGTATTATGAAGAATGCTCGGATGTTTTAT  
 GTGCTGAAAGAGTTGGCCAGATGACTAAGACATATAATGACATAGATGCTGTCACTCGGCTTCTTGAGGA  
 GAAAGAGCGGGATTTAGAAATGGCCGCTCGCATCGGCCAGTCGTTGTTGAAGAAGAACAAGACCCTAACC  
 GAGAGGAACGAGCTGCTGGAGGAGCAGGTGGAACACATCAGGGAGGAGGTGTCTCAGCTCCGGCATGAGC  
 TGTCCATGAAGGATGAGCTGCTTTCAGTTCTACACCAGCGCTCGGAGGAGAGTGAGCCCGAGTCCGTTTG  
 CTCAACCCCGTTGAAGAGGAATGAGTCGTCCTCCTCAGTCCAGAATTACTTTTCAATTTGGATTCTCTTCAA  
 AAGAAGCTGAAAGACCTTGAAGAGGAGAATGTTGTAATTCGATCCGAGGCCAGCCAGCTGAAGACAGAGA  
 CCATCACCTATGAGGAGAAGGAGCAGCAGCTGGTCAATGACTGCGTGAAGGAGCTGAGGGATGCCAATGT  
 CCAGATTGCTAGTATCTCAGAGGAAGTGGCCAAGAAGACGGAAGATGCTGCCCGCAGCAAGAGGAGATC  
 ACACACCTGCTATCGCAAATAGTTGATTTGCAGAAAAAGGCAAAAAGCTTGCGCAGTGGAAAAATGAAGAAC  
 TTGTCCAGCATCTGGGGGCTGTAAGGATGCCAGCGGAGCTCACAGCCGAGCTGCGTGAGCTGGAGGA  
 CAAGTACGCAGAGTGCATGGAGATGCTGCATGAGGCGCAGGAGGAGCTGAAGAACCTCCGGAACAAAACC  
 ATGCCCAATACCACGCTCTCGGCGTACCACTCACTGGGCTGTTCCCATGGATTCTTGGCAGCAGAGA  
 TTGAGGGAACGATGCGCAAGGAGCTGCAGTTGGAAGAGGCCGAGTCTCCAGACATCACTACCAGAAGCG  
 TGTCTTTGAGACAGTAAGAAACATCAACCAGGTTGTCAAGCAGAGATCTTGACCCTTCTCCATGAAC  
 ATCCCCGGCTCCAACAGTCTCGGCCATGAACTCCCTCCTGTCCAGCTGCGTCAGCACCCCCCGGTCCA  
 GCTTCTACGGCAGCGACATAGGCAACGTCGTCCTCGACAACAAGACCAACAGCATCATTCTGGAACAGCA  
 GGCAGCCGACCTGGGAAACGATGAGCGGAGTAAGAAGCCGGGGACGCCGGGACCCCGAGCTCCACGAC  
 CTGGAGACGCGCTGAGGCGGCTGTCCCTGCGCCGGGAGAACTACCTCTCGGAGAGGAGTTCTTTGAGG  
 AGGAGCAAGAGAGGAAGCTCCAGGAGCTGGCGGAGAAGGGCGAGCTGCGCAGCGGCTCCCTCACACCCAC  
 TGAGAGCATCATGTCCCTGGGCACGCACTCCCGCTTCTCCGAGTTCACCGGCTTCTTGCGATGTCTTC  
 AGCAGCCGCTCTACCTGCCTGAGAAGCTCCAGATCGTGAAGCCGCTGGAAGGTGATCACGCGGGGCTC  
 GGCCCTCTGTCTCCTCGGGGACTCCCTTTGGTCCCTGATCCACCTGCGGAAGGCGGGGCACCTCTG  
 TCACGCCACTCCTTTTTCTTCCGCGACAGCCACCCGCGCTGCTGTTTGAGTTCCTC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG234425 representing NM\_001265610  
 Red=Cloning site Green=Tags(s)

MQKFIADYYELDWWYEECSVDLCAERVGQMTKYNDIDAVTRLLEEKERDLELAARIGQSLLKKNKTLT  
 ERNELLEEQVEHIREEVSQLRHEL SMKDELLQFYTSAAEESEPE SVCSTPLKRNESSSVQNYFHLDLQ  
 KKLKDL EEENVLRSEASQLKTETITYEKEQQLVNDCKELRDANVQIASISEELAKKTEDAARQEEI  
 THLLSQIVDLQKKAKACAVENEELVQHLGAAKDAQRQLTAELRELEDKYAECMEMLHEAQEELKNLRNKT  
 MPNTTSRRYHSLGLFPMDSLAAEIEGTMRKELQLEEAESPDITHQKRVFETVRNINQVVKQRSLTPSPMN  
 IPGSNQSSAMNSLLSSCVSTPRSSFYGSIDIGNVLDNKNISIILETEAADLGNDERSKKPGTPTGPGSHD  
 LETALRRLSLRRENYLSERRFFEEEQERKLQELAEKGELRSGSLTPTESIMSLGTHSRFSEFTGFSGMSF  
 SSRSYLPEKLQIVKPLEGDHAGPRPLSVLLGDSLWLSIHLRKAGHLCHAYSFFFRRD SHPRCWFEFL

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_001265610

**ORF Size:** 1668 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\\_001265610.1](#), [NP\\_001252539.1](#)

**RefSeq Size:** 3260 bp

**RefSeq ORF:** 1671 bp

**Locus ID:** 22906

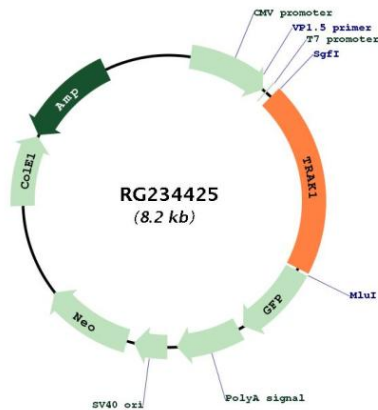
**UniProt ID:** [Q9UPV9](#)

**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 RG234425