

## Product datasheet for **RC234425**

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

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	TRAK1 (NM_001265610) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TRAK1
Synonyms:	EIEE68; MILT1; OIP106
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC234425 representing NM\_001265610  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCAGAAATTTATCGAAGCGGATTATTATGAACTAGACTGGTATTATGAAGAATGCTCGGATGTTTTAT  
 GTGCTGAAAGAGTTGGCCAGATGACTAAGACATATAATGACATAGATGCTGTCACTCGGCTTCTTGAGGA  
 GAAAGAGCGGGATTTAGAATTGGCCGCTCGCATCGGCCAGTCGTTGTTGAAGAAGAACAAGACCCTAACC  
 GAGAGGAACGAGCTGCTGGAGGAGCAGGTGGAACACATCAGGGAGGAGGTGTCTCAGCTCCGGCATGAGC  
 TGTCCATGAAGGATGAGCTGCTTCACTTACACCAGCGCTCGGAGGAGAGTGAGCCCGAGTCCGTTTG  
 CTAACCCCGTTGAAGAGGAATGAGTCGTCCTCCTCAGTCCAGAATTACTTTCAATTTGGATTCTCTTCAA  
 AAGAAGCTGAAAGACCTTGAAGAGGAGAATGTTGTAATTCGATCCGAGGCCAGCCAGCTGAAGACAGAGA  
 CCATCACCTATGAGGAGAAGGAGCAGCAGCTGGTCAATGACTGCGTGAAGGAGCTGAGGGATGCCAATGT  
 CCAGATTGCTAGTATCTCAGAGGAAGTGGCCAAGAAGACGGAAGATGCTGCCCGCAGCAAGAGGAGATC  
 ACACACCTGCTATCGCAAATAGTTGATTTGCAGAAAAAGGCAAAAAGCTTGCGCAGTGAAAAATGAAGAAC  
 TTGTCCAGCATCTGGGGGCTGCTAAGGATGCCAGCGGAGCTCACAGCCGAGCTGCGTGAGCTGGAGGA  
 CAAGTACGCAGAGTGCATGGAGATGCTGCATGAGGCGCAGGAGGAGCTGAAGAACCTCCGGAACAAAACC  
 ATGCCCAATACCACGCTCTCGGCGTACCACTCACTGGGCTGTTCCCATGGATTCTTGGCAGCAGAGA  
 TTGAGGGAACGATGCGCAAGGAGCTGCAGTTGGAAGAGGCGGAGTCTCCAGACATCACTACCAGAAGCG  
 TGTCTTTGAGACAGTAAGAAACATCAACCAGGTTGTCAAGCAGAGATCTCTGACCCCTTCTCCATGAAC  
 ATCCCCGGCTCCAACAGTCTCGGCCATGAACTCCCTCTGTCCAGCTGCGTCAGCACCCCCCGGTCCA  
 GCTTCTACGGCAGCGACATAGGCAACGTCGTCCTCGACAACAAGACCAACAGCATATTCTGAAACAGAG  
 GGCAGCCGACCTGGGAAACGATGAGCGGAGTAAGAAGCCGGGGACGCGGGCACCCAGGCTCCACGAC  
 CTGGAGACGCGCTGAGGCGGCTGTCCCTGCGCCGGGAGAACTACCTCTCGGAGAGGAGTTCTTTGAGG  
 AGGAGCAAGAGAGGAAGCTCCAGGAGCTGGCGGAGAAGGGCGAGCTGCGCAGCGGCTCCCTCACACCCAC  
 TGAGAGCATCATGTCCCTGGGCACGCACTCCCGCTTCTCCGAGTTCACCGGCTTCTTGGCATGTCTTC  
 AGCAGCCGCTCTACCTGCCTGAGAAGCTCCAGATCGTGAAGCCGCTGGAAGGTGATCACGCGGGGCTC  
 GGCCCTCTGTCTCTCGGGGACTCCCTTTGGTCCCTGATCCACCTGCGGAAGGCGGGGCACCTCTG  
 TCACGCCACTCCTTTTTCTTCCGCGACAGCCACCCGCGCTGCTGTTTGAGTTCCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC234425 representing NM\_001265610  
 Red=Cloning site Green=Tags(s)

MQKFIEADYYELDWWYEECSVDLCAERVQMKTNYNDIDAVTRLLEEKERDLELAARIGQSLLKKNKTLT  
 ERNELLEEQVEHIREEVSQRLRHELSMKDELLQFYTSAAEESPEPESVCSTPLKRNESSSSVQNYFHLDLQ  
 KKLKDLLEENVLRSEASQLKTEITITYEKEQQLVNDCKELRDANVQIASISEELAKKTEDAARQEEI  
 THLLSQIVDLQKAKACAVENEELVQHLGAAKDAQRQLTAELELEDKYAECMEMLHEAQEELKNLRNKT  
 MPNTTSRRYHSLGLFPMDSLAAEIEGTMRKELQLEEAESPDITHQKRVFETVRNINQVVKQRSLTPSPMN  
 IPGSNQSSAMNSLLSSCVSTPRSSFYGSIDIGNVLDNKTNSIILETEADLGNDRSCKPGTPTGPGSHD  
 LETALRRLSLRRENYLSERRFFEEEQERKLQELAEKGLRSGSLTPTESIMSLGTHSRFSEFTGFSGMSF  
 SSRSYLPEKLQIVKPLEGDHAGPRPLSVLLGDSLWLIHLRKAGHLCHAYSFFFRRDHPRCWFEFLL

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**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](#)

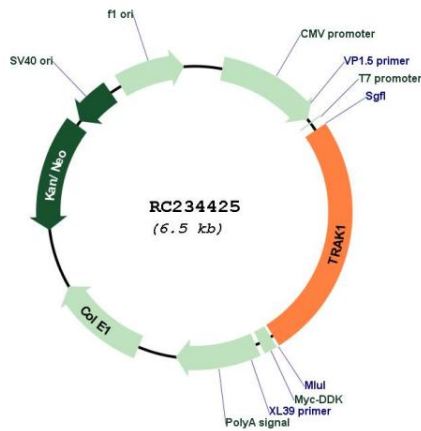
**Cytogenetics:** 3p22.1

**Protein Families:** Transcription Factors

**MW:** 64.1 kDa

**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 RC234425