

Product datasheet for **RC234813**

TRAK1 (NM_001265608) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TRAK1 (NM_001265608) 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:

>RC234813 representing NM_001265608
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCATTGGTTTTTCAATTCGGGCAGCCCGTCAGGGCTCAGCCTCTGCCAGGACTCTGCCACGGCAAGC
TCATTCGGACAAAACGCCTGTGATGTGTGCAACAGCACCGATCTTCGGAAAGTCGAGATCATTAGCCTGCT
GGAGGAGCAGCTGCCCCATTATAAGTTAAGAGCCGACACCATCTACGGTTATGACCACGACGACTGGCTC
CATACACCTCTCATTCTCCAGATGCCAACATTGACCTCACAAACCGAGCAAATTGAAGAGACGTTAAAT
ACTTCTTTTTATGTGCTGAAAGAGTTGGCCAGATGACTAAGACATATAATGACATAGATGCTGCTCACTCG
GCTTCTTGAGGAGAAAGAGCGGGATTTAGAATTGGCCGCTCGCATCGCCAGTCGTTGTTGAAGAAGAAC
AAGACCCTAACCGAGAGGAACGAGCTGCTGGAGGAGCAGGTGGAACACATCAGGGAGGAGGTGTCTCAGC
TCCGGCATGAGCTGTCCATGAAGGATGAGCTGCTTCAGTTCTACACCAGCGCTCGGAGGAGAGTGAGCC
CGAGTCCGTTTGCTCAACCCCGTTGAAGAGGAATGAGTCGTCCTCCTCAGTCCAGAATTACTTTTCAATTTG
GATTCTCTTCAAAGAAGCTGAAAGACCTTGAAGAGGAGAATGTTGTACTTCGATCCGAGGCCAGCCAGC
TGAAGACAGAGACCATCACCTATGAGGAGAAGGAGCAGCAGCTGGTCAATGACTGCGTGAAGGAGCTGAG
GGATGCCAATGTCCAGATTGCTAGTATCTCAGAGGAATGGCCAAGAAGACGGAAGATGCTGCCCGCCAG
CAAGAGGAGATCACACACCTGCTATCGCAAATAGTTGATTTGCAGAAAAAGGCAAAGCTTGCGCAGTGG
AAAATGAAGAACTTGTCCAGCATCTGGGGGCTGCTAAGGATGCCAGCGGCAGCTCACAGCCGAGCTGCG
TGAGCTGGAGGACAAGTACGCAGAGTGCATGGAGATGCTGCATGAGGCGCAGGAGGAGCTGAAGAACCTC
CGGAACAAAACCATGCCAATACCACGCTCGGCCGCTACCACTACTGGGCTGTTTCCCATGGATTCTC
TGGCAGCAGAGATTGAGGGAACGATGCGCAAGGAGTGCAGTTGGAAGAGGCCGAGTCTCCAGACATCAC
TACCAGAAGCGTGTCTTTGAGACAGTAAGAAACATCAACCAGGTTGTCAAGCAGAGATCTCTGACCCCT
TCTCCCATGAACATCCCCGGCTCCAACAGTCCCTCGGCCATGAACTCCCTCCTGTCCAGCTGCGTCAGCA
CCCCCGGTCCAGCTTCTACGGCAGCGACATAGGCAACGTCGTCCTCGACAACAAGACCAACAGCATCAT
TCTGGAACAGAGGCAGCCGACCTGGGAAACGATGAGCGGAGTAAGAAGCCGGGACGCCGGGCACCCCA
GGCTCCCACGACCTGGAGACGGCGCTGAGGCGGCTGTCCCTGCGCCGGGAGAACTACCTCTCGGAGAGGA
GGTTCTTTGAGGAGGAGCAAGAGAGGAAGCTCCAGGAGCTGGCGGAGAAGGGCGAGCTGCGCAGCGGCTC
CCTCACACCCACTGAGAGCATCATGTCCCTGGGCACGCACTCCCGCTTCTCCGAGTTCACCGGCTTCTCT
GGCATGTCTTACAGCAGCCGCTCCTACCTGCTGAGAAGCTCCAGATCGTGAAGCCGCTGGAAGGTTCCG
CCACACTTCAACACTGGCAGCAGTTGGCCAACTCACCTTGGGGGCATCCTGGACCCCCGCCCCGGTGT
GGTCACCAAGGGCTTCCGGACGCTGGATGTTGACCTGGACGAAGTGTACTGCCTTAACGACTTTGAAGAA
GATGACACAGGTGACCACATTTCTCTCCACGCCTAGCTACCTCCACTCCAGTTCAGCACCCAGAGACCT
CAGGTGAGAGGTCCCAAGCACGTGTGACTGTCTCAGGCAGCAGAAGTTACCCGAGCCGGCCTCAGGCTTC
CCCAGAGGAGATGCAGGAGCCGCCAGCGGCCACGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG
GGTGAGGGCACCACGATAAGTCTGTAACTTGGCACCTTCCCGGAGGCAGAGTTTTGGGCCATTCTCA
CCTCTGTTCCAGGCACCATCCGTAGTGGTCTCTGTCTGTAGCTTCCGCTCGTCTGTGTGGG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC234813 representing NM_001265608
Red=Cloning site Green=Tags(s)

MALVFQFGQPVRAQPLPGLCHGKLI RTNACDVCNSTDLPEVEIISLLEEQLPHYKLRADTIYGYDHDWL
 HTPLISPDANIDL TTEQIEETLKYFLLCAERVGQMTKTYNDIDAVTRLLEEKERDLELAARIGQSLLKKN
 KTLTERNELLEEQVEHIREEVSQLRHEL SMKDELLQFYTSAEESEPEVCSTPLKRNESSSVQNYFHL
 DSLQKCLKDLEEENVLRSEASQLKTETIYEEKEQQLVNDVCVELRDANVQIASISEELAKKTEDAARQ
 QEEITHLLSQIVDLQKKAKACAVENEELVQHLGAAKDAQRLTAELRELEDKYAECMEMLHEAQEELKNL
 RNKTMPNTTSRRYHSLGLFPMDSLAAEIEGTMRKELQLEEAESPDIHQKRVFETVRNINQVVKQSLTP
 SPMNIPGSNQSSAMNLLSSCVSTPRSSFYGSDIGNVVLDNKTNSIILETEAADLGNDRSCKKPGTPTGTP
 GSHDLETALRRLSLRRENYL SERRFFEEEQERKLQELA EK GELRSGSLTPTESIMSLGTHSRFSEFTGFS
 GMSFSSRSYLPEKLQIVKPLEGSATLHHWQQLAQPHLGGILDPRPGVVTKGFRTLDVDLDEVYCLNDFEE
 DDTGDHISLPRLATSTPVQHPETSGERSQARVTVSGRSYPSRPQASPEEMQEPAAEEEEEEEEEGS
 GEGTTISPVNLPFPEAEFWAILTSVPGTIRSGSLSVASARLCG

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

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](#)

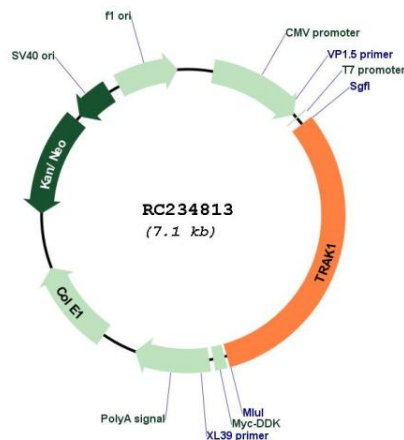
Cytogenetics: 3p22.1

Protein Families: Transcription Factors

MW: 84.1 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 RC234813