

Product datasheet for **MR209421**

Trak1 (NM_175114) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Trak1 (NM_175114) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Trak1
Synonyms:	2310001H13Rik; AI413908; AI467545; hyrt; mKIAA1042
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>MR209421 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCATTGGCAATTCAGCTCAGGCAGCCCTCCAGGGCCCAACCTCTGCCAGGACTCAGCCACACTGG
 CTGGGACAGACTCATGTGACGTGTGCAACAGCACCAACCTTCCAGAAGTTGAGATCATTAGCCTGCTGGA
 GGAACAGCTGCCCCATTACAAGCTAAGAGCGGACACCATCTATGGTTACGACCACGATGACTGGCTGCAT
 ACGCCCTCATCTCCCCAGATGCCAACATCGACCTCACAACCTGAGCAGATCGAAGAGACGCTGAAATACT
 TCCTTCTATGTGCCGAAAGAGTTGGCCAGATGACTAAGACATACAATGACATTGATGCTGTACAGAGGCT
 TCTTGAGGAGAAAGAGCGGGATTTGGAGCTGGCTGCGAGGATCGGTCACTATTGTTGAAGAAGAACAAG
 ACCCTAACTGAGAGGAATGAACCTGCTGGAAGAGCAGGTGGAGCACATCCGGGAGGAGGTGTCTCAGTCC
 GACATGAGCTGTCCATGAAAGACGAGCTGCTTCAATTCTACACCAGTCCCGCTGAGGAGACGAGCCTGA
 GTCGCTGCTCAACCCCGCTGAAGAGGAACGAGTCCCTCCTCCGTCAGAACTACTTCCACCTGGAC
 TCTCTTCAGAAGAAGCTCAAGGACCTCGAAGAGGAGAACGTTGTACTTCCGATCCGAGGCCTGTGAGTGA
 AGACAGAGACCATCACCTATGAGGAGAAGGAGCAGCAGCTGGTGAACGACTGCGTGAAGGAGCTGAGGGA
 TGCCAACGTCCAGATTGCGAGCATCTCTGAGGAGCTGGCTAAGAAGACGGAAGATGCCGCCCGCCAGCAG
 GAGGAGATCACCCACCTGCTGTGCGAAATCGTGGACTTACAGAAGAAGGCAAAATCTTGCAGCGTGGAAA
 ATGAAGAGCTTGTCCAGCACCTGGGCGCTGCCAAGGACGCCAGCGTCAACTCACAGCCGAGCTCCGAGA
 GCTGGAGGATAAGTACGCGGAGTGCATGGAGATGCTTTCATGAGGCTCAGGAGGAGTTGAAGAACCTGCGG
 AACAGACGATGCCACGTCCCGGCGCTACCACTCTCTGGGCTGTTCCCATGGACTCGTGTGCTGAGGAA
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 AACATCCCGGGCTCCAACAGTCTCAGCCATGAACTCCCTCCTGTCCAGCTGCGTCAGCACCCCTCGCT
 CCAGTCTTACGGCAGCGACGTGAGCAACGTGGTCTCGATAACAAAACCAACAGCATCCTCCTGGAGAC
 CGAGGCAGCCGACCTGGGAAACGAGGACCACAATAAGAAGCCGGGCACTCCAGGCACGCCAGGCTCCCAT
 GACCTGGAGACGGCACTTAGGCGGCTATCCCTACGCCGGGAGAACTACCTGTCTGAGCGGAGGTTCTTCG
 AGGAGGAGCAGGAGGAAAGCTGCGAGAGCTGGCTGAGAAGGGGGAGCTGCACAGTGGCTCGCTCACGCC
 CACCGAGAGCATCATGTCCCTGGGAACACACTCACGCTTCTCCGAGTTCACGGGCTTCTCTGGCATGTCC
 TTCAGCAGCCGCTCCTACCTGCCGAGAAGCTGCAGATCGTGAAGCCACTCGAAGTTTCAGCCACGCTTC
 ACCACTGGCAGCAATTGGCCAGCCTCATCTTGGGGGATCCTGGACCCCGTCCCTGGTGTGGTACCAA
 GGGCTTCCGACTTTGGATGTTGACCTGGATGAAGTGTACTGCCTTAACGACTTTGAGGAAGATGACACA
 GGTGACCACATTTCTCTGGCGGGCTAGCTACCTCCACGCCAATTCAGCACCCGGAGACCTCAGCGCACC
 ACCCTGGGAAGTGCATGTACAGACCAACTCAACTTTACCTTTACCACTTGCCGCATCCTGCACCCCTTC
 AGACGAGCTCACTCGGTCACGCCAAGCCTTAACTCTGCCCCAGTCCGGCTTGTAGCAGTACCAGCCAC
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 TCCGTGAGTCCACGACAACCATGAGCACGTCCCTGGGGCTGGTATGGTTGCTGAAGGAGCGAGGCATCTC
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 TCGAGTTCAGTGCACGAGCCCTCCCTACAACAACTTCTGGCTTCAAGCCGGCCAGCTCTATCCTGAG
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 TGACTGAGGAACAGGGACCTCTCCTCTGTGACCACAGGGCCAGCACAGGCTCTGTCCCTGGGGGCT
 GGTCCCCGAGGGCTGCCTCTGGGGTGGCCAGTGGCATCCGACGGAATCGCAGCTTCCCCACTATGGTC
 GGGTCCAGCGTGCAGATGAGAGCCCGTATCCTCACCTCGGGCATCTGATGGGTGCTAAGCTCCCCA
 AACAGACTAGCTTGCGG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR209421 protein sequence
 Red=Cloning site Green=Tags(s)

MALAIQLRQPSRAQPLPGLSHTLAGTDCDVCNSTNLPEVEIISLLEEQLPHYKLADTIYGYDHDWLH
 TPLISPANIDL TTEQIEETLKYFLLCAERVGMKTYNDIDAVTRLLEEKERDLELAARIGQSLKKNK
 TLTERNELLEQVEHIREEVSQRLRHELSMKDELLQFYTSAAEESEPEVCSTPLKRNESSSVQNYFHLD
 SLQKLLKDL EEENVLRSEACQLK TETIT YEEKEQQLVND CVKELRDANVQIASISEELAKKTED AARQQ
 EEITHLLSQIVDLQKKAKSCAVENEELVQHLGAAKDAQRLTAELRELEDKYAECMEMLHEAQEELKNLR
 NKTMPTRSRYHSLGLFPMDSLAAEIEGTRKELQLEELSPDITHQKRVFETVRNVNQVVKQRSLTPSPM
 NIPGSNQSSAMNSLLSSCVSTPRSSFYGSVSNVLDNKTNSILLETEAADLGNEDHNKPKGTPGTPGSH
 DLETALRRLSLRRENYLSERRFFEEEQERKLRELAEKGELHSGSLTPTESIMSLGTHSRFSEFTGFSGMS
 FSSRSYLPEKLQIVKPLEGSATLHHWQQLAQPHLGGILDPRPGVVTGKFRITLDVDLDEVYCLNDFEEDT
 GDHISLAGLATSTPIQHPETSAHHPGKCMSQTNSTFTFTTCRILHPSDELTRVTPSLNSAPAPACSSSTSH
 LKSTPVATPCTPRRLSLAESFTNVRESTTMTSTSLGLVWLLKERGISAAVYDPQSWDRAGRGSLLHSYTP
 RMAVIPSTPPNSPMQTPSAPPSFEFKCTSPYNNFLASKPASSILREVREKRPVRSSESQTDVSVSNLN
 LVDKVRRFGVARVNSGRARIPTL TEEQGPLLCGPTGPAQALVPGLVPEGLPLGCPGSGIRNRNSFPTM
 GSSVQMRAPVILTSGILMGAKLPKQTSLR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

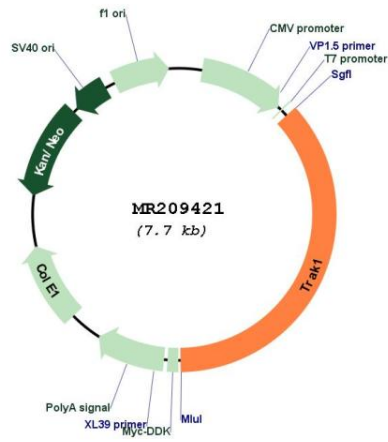


ACCN: NM_175114

ORF Size: 2820 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:	<ol style="list-style-type: none">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_175114.3 , NP_780323.2
RefSeq Size:	4914 bp
RefSeq ORF:	2820 bp
Locus ID:	67095
UniProt ID:	Q6PD31
Cytogenetics:	9 72.41 cM
MW:	104.5 kDa
Gene Summary:	Involved in the regulation of endosome-to-lysosome trafficking, including endocytic trafficking of EGF-EGFR complexes and GABA-A receptors (By similarity). Involved in mitochondrial motility (PubMed:24995978). When O-glycosylated, abolishes mitochondrial motility. Crucial for recruiting OGT to the mitochondrial surface of neuronal processes (By similarity). 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 MR209421