

## Product datasheet for **MC216473**

### **Ntrk2 (NM\_008745) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ntrk2 (NM_008745) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ntrk2
Synonyms:	GP145-TrkB/GP95-TrkB; Tkrb; trk-B; trkB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**Fully Sequenced ORF:** >MC216473 representing NM\_008745  
 Red=Cloning site Blue=ORF

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTCGCCTGGCTGAAGTGGCATGGACCCGCCATGGCGGGCTCTGGGGCTTATGCCTGCTGGTCTTGG  
 GCTTCTGGAGGGCTCTCTCGCCTGCCGACGTCCTGCAAATGCAGTTCCGCTAGGATTTGGTGTACTGA  
 GCCTTCTCCAGGCATCGTGGCATTCCCGAGGTTGGAACCTAACAGCGTTGACCCGGAGAACATCACGGAA  
 ATTCTCATTGCAAACCAGAAAAGGCTAGAAATCATCAATGAAGATGACGTTGAAGCTTACGTGGGGCTGA  
 GAAACCTTACAATTGTGGATTCCGGCTTAAAGTTTGTGGCTTACAAAGCGTTTCTGAAAAACAGCAACCT  
 GCGGCACATAAATTTACACGAAACAAGCTGACGAGTTTGTCCAGGAGACATTTCCGCCACCTTGACTTG  
 TCTGACCTGATCCTGACGGTAATCCGTTACGTGCTCCTGCGACATCATGTGGCTCAAGACTCTCCAGG  
 AGACTAAATCCAGCCCCGACACTCAGGATTTGACTGCCTCAATGAGAGCAGCAAGAACATGCCCTGGC  
 GAACTGCAGATACCAATTGTGGTCTGCCATCTGCACGTCTGGTGTCTCTAACCTCACGTGGAGGAA  
 GAAAGTCTGTGACCCTTCTCTGCAAGTGTGGGGGTGACCCACTCCACCTTGTACTGGACGTTGGGA  
 ATTTGGTTTCAAGCACATGAATGAAACAAGCCACACACAGGGCTCCTTAAGGATAACGAACATTTTCATC  
 TGATGACAGTGGAAAGCAAATCTTGTGTGGCAGAAAACCTTGTAGGAGAAGATCAAGATTCTGTGAAC  
 CTCACTGTGCATTTTGCGCCAATATCACGTTTCTCGAGTCTCCAACCTCAGATCACCCTGGTGCATTC  
 CATTCACTGTGAGAGGCAACCCCAAGCCTGCGCTTCAGTGGTTCTACAATGGGGCCATACTGAATGAGTC  
 CAAGTACATCTGTACTAAGATCCACGTCACCAATCACACGGAGTACCATGGCTGCCTCCAGCTGGATAAC  
 CCCACTCATGAATAACGGAGACTACACCCTGATGGCCAAGAACGAGTATGGGAAGGATGAGAGACAGA  
 TCTCCGCTCACTTCATGGGCCGGCTGGAGTCGACTACGAGACAAACCCAAATTACCCTGAAGTCTCTA  
 TGAAGACTGGACCACGCCAAGTACATTGGGGTACTACGAACAAAAGTAAATGAAATCCCTCCACGGAT  
 GTTGCTGACCAAAGCAATCGGGAGCATCTCTCGGTCTATGCCGTGGTGGTATTGCATCTGTGGTGGAT  
 TCTGCCTGCTGGTGTGCTCCTGCTCAAGTTGGCAGACATTCGAAGTTGGCATGAAAGGTTTTGT  
 TTTGTTTCATAAGATCCCACTGGATGGGTAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** Sgfl-Mlul

**ACCN:** NM\_008745

**Insert Size:** 1431 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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: [BC052014](#), [AAH52014](#)

RefSeq Size: 2279 bp

RefSeq ORF: 1431 bp

Locus ID: 18212

UniProt ID: [P15209](#)

Cytogenetics: 13 31.2 cM

**Gene Summary:** Receptor tyrosine kinase involved in the development and the maturation of the central and the peripheral nervous systems through regulation of neuron survival, proliferation, migration, differentiation, and synapse formation and plasticity. Receptor for BDNF/brain-derived neurotrophic factor and NTF4/neurotrophin-4. Alternatively can also bind NTF3/neurotrophin-3 which is less efficient in activating the receptor but regulates neuron survival through NTRK2. Upon ligand-binding, undergoes homodimerization, autophosphorylation and activation. Recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that regulate distinct overlapping signaling cascades. Through SHC1, FRS2, SH2B1, SH2B2 activates the GRB2-Ras-MAPK cascade that regulates for instance neuronal differentiation including neurite outgrowth. Through the same effectors controls the Ras-PI3 kinase-AKT1 signaling cascade that mainly regulates growth and survival. Through PLCG1 and the downstream protein kinase C-regulated pathways controls synaptic plasticity. Thereby, plays a role in learning and memory by regulating both short term synaptic function and long-term potentiation. PLCG1 also leads to NF-Kappa-B activation and the transcription of genes involved in cell survival. Hence, it is able to suppress anoikis, the apoptosis resulting from loss of cell-matrix interactions. Isoform GP95-TRKB may also play a role in neurotrophin-dependent calcium signaling in glial cells and mediate communication between neurons and glia. [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) lacks several exons and uses an alternate 3'-terminal exon, compared to variant 1. The encoded isoform (b) has a shorter and distinct C-terminus, compared to isoform a.