

## Product datasheet for **MG226042**

### **Ntrk1 (NM\_001033124) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ntrk1 (NM_001033124) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ntrk1
Synonyms:	C80751; Tkr; trk; TrkA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>MG226042 representing NM\_001033124  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGCATCGCC

ATGCTGCGAGGCCAGCGCTCGGGCAGCTGGGCTGGCATCGCCCGGCCGGGGCTAGGCAGTCTGATGA  
 CTTGTTGATGCTGGCCTGTGCCTCCGCCGCATCCTGTGCGGAGGTCTGCTGTCCCGTGGGCCCTCGGG  
 GCTGCGCTGCACCAAGGCGAGGTCCTGGATACCTCCGCGGCCTGCGGGGCGCCGGGAACCTGACGGAG  
 CTCTACGTGAAAAACAGCAGCACCTGCAACGCTTGGAGTTTGGAGACCTGCAGGGCCTGGGGGAGTTGA  
 GAAGCCTAACCATCGTGAAGAGTGGCCTCCGCTTTGTGGCCCCAGATGCCTCCGTTTACCCTCGGCT  
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 CTCAATCAGCCCACGCATGTCAACAACGGGAACACACCCTGCTGGCGGCCAACCCTACGGCCAGGCTG  
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 AATGTGGACAGAGGAGCAAAATTTGGGATCAACCCTGCTGTATTAGCTCCAGAGGATGGGCTGGCCAT  
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 AGCATCCTCTACCGCAAGTTCAGCACCGAGAGCGATGTGTGGAGCTTTGGGGTGGTGTCTGGGAGATCT  
 TCACCTATGAAAGCAGCCCTGGTACCAGCTCTCAACACTGAGGCGATCGAGTGTATCACGAGGGCCG  
 GGAGCTGGAGCGGCCCGCGCCTGCCCTCTGATGTCTACGCCATCATGCGAGGCTGCTGGCAGCGAGAA  
 CCGCAGCAACGCCTCAGCATGAAGGATGTGCACGCGCTCTGCAGGCCCTGGCACAGGCGCCACCCAGTT  
 ACCTGGACGTTCTGGGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG226042 representing NM\_001033124  
 Red=Cloning site Green=Tags(s)

```
MLRGQRLGQLGWHRPAAGLGSLMTSLMLACASAASCREVCCPVGPSGLRCTRAGSLDTLRGLRGAGNLTE
LYVENQQHLQRLEFEDLQGLGELRSLTIVKSGLRVAPDAFRFTPRLSHLNLSSNAESLSWKTVQGLSL
QDLTLSGNPLHCSCALFWLQRWEQEGLCGVHTQTLHDSGPGDQFLPLGHNTSCGVPTVKIQMPNDSVEVG
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QVSVSFPASVHLGLAVEQHHCIPFSVDGQPAPSLRWLFNGSVLNETSFIFTQFLESALTNETMRHGCLR
LNQPTHVNNGNYTLLAANPYGQAAASVMAAFMDNPFEPEDPIPVSFSPVDGNSTRDPVEKKDETPFG
VSVAVGLAVSAALFLSALLLVLNKCGQRSKFGINRPAVLAPEDGLAMSLHFMTLGGSSLSPTEGKGSGLQ
GHIMENPQYFSDTCVHHIKRQDIILKWELGEGAFGKVFLAECYNLLNDQDKMLVAVKALKEASENARQDF
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LAVASQVAAGMVYLAHLHFVHRDLATRNLVGQGLVVKIGDFGMSRDIYSTDYYRVGGRTMLPIRWMPPE
SILYRKFSTESDVWSFGVVLWEIFTYKQPWYQLSNTEAIECITQGRELERPRACPPDVYAIMRGCWQRE
PQQRLSMKDVHARLQALAQAPPSYLDVLG
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI



**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_001033124.1](#), [NP\\_001028296.1](#)

**RefSeq Size:** 2606 bp

**RefSeq ORF:** 2400 bp

**Locus ID:** 18211

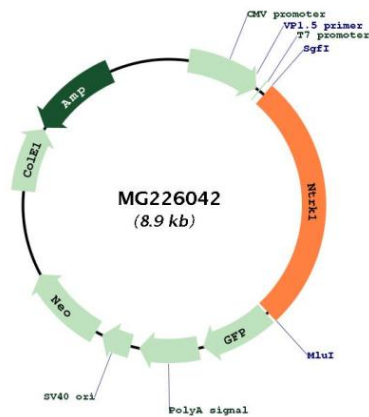
**UniProt ID:** [Q3UFB7](#)

**Cytogenetics:** 3 38.62 cM

**Gene Summary:**

Receptor tyrosine kinase involved in the development and the maturation of the central and peripheral nervous systems through regulation of proliferation, differentiation and survival of sympathetic and nervous neurons. High affinity receptor for NGF which is its primary ligand, it can also bind and be activated by NTF3/neurotrophin-3. However, NTF3 only supports axonal extension through NTRK1 but has no effect on neuron survival. Upon dimeric NGF 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 driving cell survival and differentiation. Through SHC1 and FRS2 activates a GRB2-Ras-MAPK cascade that regulates cell differentiation and survival. Through PLCG1 controls NF-Kappa-B activation and the transcription of genes involved in cell survival. Through SHC1 and SH2B1 controls a Ras-PI3 kinase-AKT1 signaling cascade that is also regulating survival. In absence of ligand and activation, may promote cell death, making the survival of neurons dependent on trophic factors.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG226042