

Product datasheet for **RC225929**

Neurofilament (NEFM) (NM_001105541) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Neurofilament (NEFM) (NM_001105541) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Neurofilament
Synonyms:	NEF3; NF-M; NFM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC225929 ORF sequence, **codon optimized**.
 Due to the complexity of NM_001105541, the ORF clone is codon optimized for mammalian Expression.
 The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCCAGACATCTTAGAGAGTACCAGGATCTCCTTAACGTCAAGATGGCGCTGGATATAGAAATTGCCG
 CCTATCGCAAGCTTCTGGAGGGCGAGGAAACAAGATTTTCCACCTTTCGGGGTCAATCACCGGCCCCCT
 GTACACTCACAGACCACCATTACCATCTTCCAAAATTCAGAAGCCAAAGGTCGAGGCTCCAAAATTG
 AAGGTGCAACACAAGTTTGTGAAGAGATCATTGAGGAAACAAAAGTGGAAAGACGAGAAGAGCGAGATGG
 AGGAGGCCCTCACGGCCATCACCGAAGAGCTCGCTGTGAGCATGAAGGAAGAGAAAAAGGAAAGCCGCGA
 AGAGAAAGAGGAGGAACAGAAGCTGAGGAAGAGGAGGTGGCTGCCAAGAAGAGTCCAGTCAAGGCCACT
 GCCCTGAGGTGAAAGAGGAGGAGGGGGAGAAAGGAAGAGGAAGGCCAGGAAGAGGAGGAGGAAGAAG
 ATGAAGGAGCCAAGAGCGACCAGGCCAAGAAGGAGGGAGCGAAAAAGAGGCAGCTCCGAAAAAGAGGA
 GGGGAGCAGGAGGAAGGCGAAACTGAGGCGGAGGCCAAGGCCAAGAGGCCGAGCTAAAGAGGAGAAA
 AAGGTGGAAGAGAAGAGCGAAGAGGTGCCACGAAGGAGGAGCTGGTAGCCGATGCTAAGGTTGAGAAAC
 CTGAAAAAGCTAAATCTCCCGTCCCAAGTCACCGGTGGAGGAGAAGGAAAAATCTCCCGTACCCAAAAG
 CCCGGTTGAAGAAAAAGGCAAAAGTCCCGTCCCTAAGAGTCCCGTGGAGGAGAAGGTAATCACCAGTG
 CCTAAGTACCAGTGGAAAGAGAAAAGCAAGAGTCCTGTGAGTAAGAGTCCTGTTGAGGAAAAAGGCTAAGT
 CCCCGTCCCAAGTCCCGGTTGAGGAGGCCAAGTCAAAGGCCGAGGTCGGAAGGAGAAACAAAAAGA
 GGAGGAGGAGAAGGAAGTCAAAGAAGCACCTAAGGAAGAAAAAGTGGAGAAAAAGGAGGAGAAGCCTAAA
 GATGTGCCCGAGAAGAAGAAGGCTGAAAGTCCAGTGAAGAGGAGGCAAGTACCGGAGGTTGTACGATCA
 CAAAGAGCGTGAAGGTGCATCTGGAAAAGGAGACAAAGGAGGAAGGCAAGCCACTTCAACAGGAGAAAGA
 GAAGGAGAAGGCAGGCGGTGAGGCGGAAGTGAAGAAGAAGGTCAGATAAAGGCCGCTAAGGTTCTCGA
 AAGGAGGATATCGCCGTTAACGGAGAGGTAGAAGTAAAGAGGAGTTCGAGCAGGAGACTAAGGAAAAAG
 GCTCTGGGAGGAGGAAGAGAAAGGAGTGGTACGAACGGACTGGATCTCAGCCCTGCCAGCAGAGAAGAA
 GGCGGAGATAAAAGTGAAGAGAAGGTGGTAGTACTAAGACTGTAGAAAAAATTAACCTGTAAGGAGGG
 GACGGCGCCACAAAATACATCACAAAGTCTGTAACCGTACTCAAAAAGTGGAGGAACATGAAGAGACTT
 TTGAAGAGAAACTGGTGTCTACCAAGAAAGTCGAGAAAGTGACCTCCCATGCTATAGTGAAGGAGGTGAC
 TCAATCAGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC225929 representing NM_001105541
 Red=Cloning site Green=Tags(s)

MARHLREYQDLLNVKMLDIEIAAYRKLLEGEETRFSTFAGSITGPLYTHRPPITISSKIQPKPVEAPKL
 KVQHKFVEEIIIEETKVEDEKSEMEEALTAITEELAVSMKEEKKEAAEKEEPEAEVEEVAAKKSPVKAT
 APEVKEEKEEKEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEE
 KVEEKSEEVATKEELVADAKVEKPEKAKSPVPKSPVEEKGKSPVPKSPVEEKGKSPVPKSPVEEKGKSPV
 PKSPVEEKGKSPVSKSPVEEKAKSPVPKSPVEEAKSKAEVKGGEQKEEKEEVEKVEAPKEEVEKKEEKP
 DVPEKKAESPVKEEVAEAVVTITKSVKHLEKETKEEGKPLQKEKEKAGGEGGSEEEGSDKAGKGSR
 KEDIAVNGEVEGKEEVEQETKEKGGREEEKGVVNTGLDLSPADEKKGDKSEEKVVVTKTVEKITSEGG
 DGATKYITKSVTVTKVEEHEETFEELVSTKKVEKVTSHAIKVEVTQSD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001105541

ORF Size: 1620 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_001105541.1](#), [NP_001099011.1](#)

RefSeq Size: 2514 bp

RefSeq ORF: 1623 bp

Locus ID: 4741

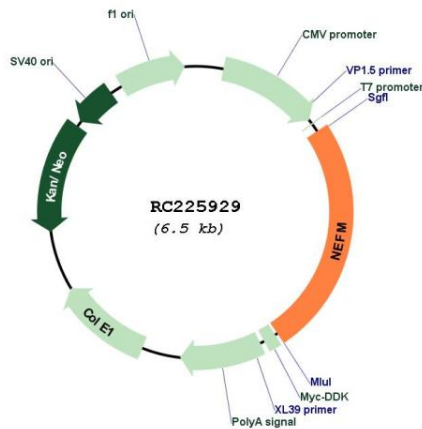
Cytogenetics: 8p21.2

Protein Pathways: Amyotrophic lateral sclerosis (ALS)

MW: 59.5 kDa

Gene Summary: Neurofilaments are type IV intermediate filament heteropolymers composed of light, medium, and heavy chains. Neurofilaments comprise the axoskeleton and functionally maintain neuronal caliber. They may also play a role in intracellular transport to axons and dendrites. This gene encodes the medium neurofilament protein. This protein is commonly used as a biomarker of neuronal damage. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Oct 2008]

Product images:



Circular map for RC225929