

Product datasheet for **RG225929**

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:	TurboGFP
Symbol:	NEFM
Synonyms:	NEF3; NF-M; NFM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG225929 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)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**GCGATCGCC**

ATGGCCAGACATCTTAGAGAGTACCAGGATCTCCTTAACGTCAAGATGGCGCTGGATATAGAAATTGCCG CCTATCGCAAGCTTCTGGAGGGCGAGGAAACAAGATTTTCCACCTTTCGGGGTCAATCACCGGCCCCCTGTACACTCACAGACCACCATTACCATCTTCCAAAATTCAGAAGCCAAAGGTCGAGGCTCCAAAATTG AAGGTGCAACACAAGTTTGTGAAGAGATCATTGAGGAAACAAAAGTGGAAAGACGAGAAGAGCGAGATGG AGGAGGCCCTCACGGCCATCACCGAAGAGCTCGCTGTGAGCATGAAGGAAGAGAAAAAGGAAAGCCGCGA AGAGAAAGAGGAGGAACAGAAGCTGAGGAAGAGGAGGTGGCTGCCAAGAAGAGTCCAGTCAAGGCCACT GCCCTGAGGTGAAAGAGGAGGAGGGGAGAAAGAGGAAGAGGAAGGCCAGGAAGAGGAGGAGGAAGAAG ATGAAGGAGCCAAGAGCGACCCAGGCCAAGAAGGAGGGAGCGAAAAAGAGGCAGCTCCGAAAAAGAGGA GGGGAGCAGGAGGAAGGCGAAACTGAGGCGGAGGCCAAGGCCAAGAGGCCAAGCTAAAGAGGAGAAA AAGGTGGAAGAGAAGAGCGAAGAGGTGCCACGAAGGAGGAGCTGGTAGCCGATGCTAAGGTTGAGAAAC CTGAAAAAGCTAAATCTCCCGTCCCAAGTCCCGTCCCTAAGAGTCCCGTGGAGGAGAAAGGTAATCACCAGT GCTAAGTACCAGTGGAAAGAGAAAGGCAAGAGTCCCTGTGAGTAAGAGTCCCTGTTGAGGAAAAAGCTAAGT CCCCAGTCCCAAGTCCCGGTTGAGGAGGCCAAGTCAAAGGCCAGGTCCGAAAAAGGAGAAACAAAAAGA GGAGGAGGAGAAGGAAGTCAAAGAAGCACCTAAGGAAGAAAAAGTGGAGAAAAAGGAGGAGAAGCCTAAA GATGTGCCCGAGAAGAAGAAGGCTGAAAGTCCAGTGAAGAGGAGGCAAGTACCGGAGGTTGTACAGTCA CAAAGAGCGTGAAGGTGCATCTGGAAAAGGAGACAAAGGAGGAAGGCAAGCCACTTCAACAGGAGAAAGA GAAGGAGAAGGCAGGCGGTGAGGCGGAAGTGAAGAAGAAGGTCAGATAAAGGCCCTAAAGGTTCTCGA AAGGAGGATATCGCCGTTAACGGAGAGGTAGAAGGTAAGAGGAGGTCGAGCAGGAGACTAAGGAAAAAG GCTCTGGGAGGAGGAAGAGAAAGGAGTGGTACGAACCGACTGGATCTCAGCCCTGCCAGCAGAGAAGAA GGCGGAGATAAAAGTGAAGAGAAGGTGGTAGTACTAAGACTGTAGAAAAAATTACCTCTGAAGGAGGG GACGGCGCCACAAAATACATCACAAAGTCTGTAACCGTACTCAAAAAGTGGAGGAACATGAAGAGACTT TTGAAGAGAAAAGTGGTGTCTACCAAGAAAGTCGAGAAAGTGACCTCCCATGCTATAGTGAAGGAGGTGAC TCAATCAGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG225929 representing NM_001105541
Red=Cloning site Green=Tags(s)

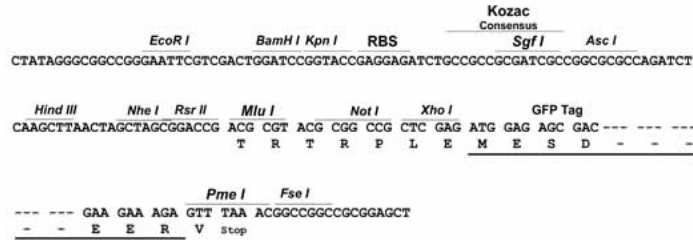
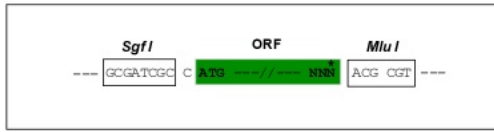
MARHLREYQDLLNVKMLDIEIAAYRKLLEGEETRFSTFAGSITGPLYTHRPPITISSKIQPKVEAPKL KVQHKFVEEIIIEETKVEDEKSEMEEALTAITEELAVSMKEEKKEAAEKEEPEAEVEEVAAKKSPVKAT APEVKEEKEEKEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEEVEE KVEEKSEEVATKEELVADAKVEKPEKAKSPVPKSPVEEKGKSPVPKSPVEEKGKSPVPKSPVEEKGKSPV PKSPVEEKGKSPVSKSPVEEKAKSPVPKSPVEEAKSKAEVKGGEQKEEKEEVEEVEEVEEVEEVEEVEEVEE DYPEKKAESPVKEEAVAEVVTITKSVKHLEKETKEEGKPLQQEKEKEKAGGEGGSEEGSDKGAKGSR KEDIAVNGEVEGKEEVEQETKEKSGREEEKGVTNGLDLSPADEKKGDKSEEKVVVTKTVEKITSEGG DGATKYITKSVTVTQKVEEHEETFEELVSTKKVEKVTSHAIKVEVTQSD

TRTRPLE - GFP Tag - V

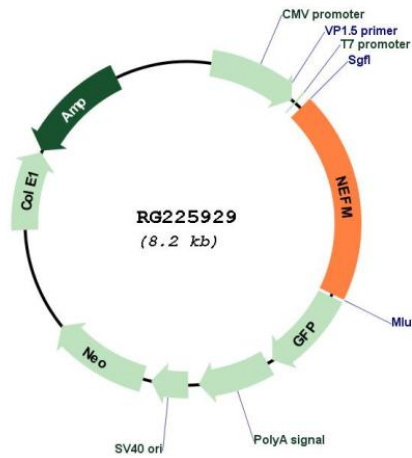
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



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:	<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_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)
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]