OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC213487

NFH (NEFH) (NM_021076) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NFH (NEFH) (NM_021076) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NFH
Synonyms:	CMT2CC; NFH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC213487 representing NM_021076
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGATGAGCTTCGGCGGCGCGGACGCGCTGCTGGGCGCCCCGTTCGCGCCGCTGCATGGCGGCGGCAGCC
TCCACTACGCGCTAGCCCGAAAGGGTGGCGCAGGCGGGACGCGCTCCGCCGCTGGCTCCTCCAGCGGCTT
CCACTCGTGGACACGGACGTCCGTGAGCTCCGTGTCCGCCTCGCCCAGCCGCTTCCGTGGCGCAGGCGCC
GCCTCAAGCACCGACTCGCTGGACACGCTGAGCAACGGGCCGGAGGGCTGCATGGTGGCGGTGGCCACCT
CACGCAGTGAGAAGGAGCAGCTGCAGGCGCTGAACGACCGCTTCGCCGGGTACATCGACAAGGTGCGGCA
GCTGGAGGCGCACAACCGCAGCCTGGAGGGCGAGGCTGCGGCGCTGCGGCAGCAGCAGGCGGGCCGCTCC
GCTATGGGCGAGCTGTACGAGCGCGAGGTCCGCGAGATGCGCGGCGCGGTGCTGCGCCTGGGCGCGGCGC
GCGGTCAGCTACGCCTGGAGCAGGAGCACCTGCTCGAGGACATCGCGCACGTGCGCCAGCGCCTAGACGA
CGAGGCCCGGCAGCGAGAGGAGGCCGAGGCGGCGGCCCGCGCGCTGGCGCGCTTCGCGCAGGAGGCCGAG
GCGGCGCGCGTGGACCTGCAGAAGAAGGCGCAGGCGCTGCAGGAGGAGTGCGGCTACCTGCGGCGCCAYC
ACCAGGAAGAGGTGGGCGAGCTGCTCGGCCAGATCCAGGGCTCCGGCGCCGCGCAGGCGCAGATGCAGGC
CGAGACGCGCGACGCCCTGAAGTGCGACGTGACGTCGGCGCTGCGCGAGATTCGCGCGCAGCTTGAAGGC
CACGCGGTGCAGAGCACGCTGCAGTCCGAGGAGTGGTTCCGAGTGAGGCTGGACCGACTGTCGGAGGCAG
CCAAGGTGAACACAGACGCTATGCGCTCAGCGCAGGAGGAGATAACTGAGTACCGGCGTCAGCTGCAGGC
CAGGACCACAGAGCTGGAGGCACTGAAAAGCACCAAGGACTCACTGGAGAGGCAGCGCTCTGAGCTGGAG
GACCGTCATCAGGCCGACATTGCCTCCTACCAGGAAGCCATTCAGCAGCTGGACGCTGAGCTGAGGAACA
CCAAGTGGGAGATGGCCGCCCAGCTGCGAGAATACCAGGACCTGCTCAATGTCAAGATGGCTCTGGATAT
AGAGATAGCCGCTTACAGAAAACTCCTGGAAGGTGAAGAGTGTCGGATTGGCTTTGGCCCAATTCCTTTC
TCGCTTCCAGAAGGACTCCCCAAAATTCCCTCTGTGTCCACTCACATAAAGGTGAAAAGCGAAGAGAAGA
TCAAAGTGGTGGAGAAGTCTGAGAAAGAAACTGTGATTGTGGAGGAACAGACAGAGGAGACCCAAGTGAC
TGAAGAAGTGACTGAAGAAGAGGAGAAAGAGGCCAAAGAGGAGGAGGGCAAGGAGGAAGAAGGGGGTGAA

View online »

GAAGAGGAGGCAGAAGGGGGAGAAGAAGAAACAAAGTCTCCCCCAGCAGAAGAGGCTGCATCCCCAGAGA
AGGAAGCCAAGTCACCAGTAAAGGAAGAGGCAAAGTCACCGGCTGAGGCCAAGTCCCCAGAGAAGGAGGA
AGCAAAATCCCCAGCCGAAGTCAAGTCCCCTGAGAAGGCCAAGTCTCCAGCAAAGGAAGAGGCAAAGTCA
CCGCCTGAGGCCAAGTCCCCAGAGAAGGAGGAAGCAAAATCTCCAGCTGAGGTCAAGTCCCCCGAGAAGG
CCAAGTCCCCAGCAAAGGAAGAGGCAAAGTCACCGGCTGAGGCCAAGTCTCCAGAGAAGGCCAAGTCCCC
AGTGAAGGAAGAAGCAAAGTCACTGGCTGAGGCCAAGTCCCCAGTGAAGGAAGAAGCAAAATCTCCAGCT
GAGGTCAAGTCCCCGGAAAAGGCCAAGTCTCCAACGAAGGAGGAAGCAAAGTCCCCTGAGAAGGCCAAGT
CCCCAGAGAAGGAAGAGGCCAAGTCCCCTGAGAAGGCCAAGTCCCCAGTGAAGGCAGAAGCAAAGTCCCC
TGAGAAGGCCAAGTCCCCAGTGAAGGCAGAAGCAAAGTCCCCTGAGAAGGCCAAGTCCCCAGTGAAGGAA
GAAGCAAAGTCCCCTGAGAAGGCCAAGTCCCCAGTGAAGGAAGAAGCAAAGTCCCCTGAGAAGGCCAAGT
CCCCAGTGAAGGAAGAAGCAAAGACCCCCGAGAAGGCCAAGTCCCCAGTGAAGGAAGAAGCTAAGTCCCC
AGAGAAGGCCAAGTCCCCAGAGAAGGCCAAGACTCTTGATGTGAAGTCTCCAGAAGCCAAGACTCCAGCG
AAGGAGGAAGCAAGGTCCCCTGCAGACAAATTCCCTGAAAAGGCCAAAAGCCCTGTCAAGGAGGAGGTCA
AGTCCCCAGAGAAGGCGAAATCTCCCCTGAAGGAGGATGCCAAGGCCCCTGAGAAGGAGATCCCAAAAAA
GGAAGAGGTGAAGTCCCCAGTGAAGGAGGAGGAGAAGCCCCAGGAGGTGAAAGTCAAAGAGCCCCCAAAG
AAGGCAGAGGAAGAGAAAGCCCCTGCCACACCAAAAACAGAGGAGAAGAAGGACAGCAAGAAAGAGGAGG
CACCCAAGAAGGAGGCTCCAAAGCCCAAGGTGGAGGAGAAGAAGGAACCTGCTGTCGAAAAGCCCAAAGA
ATCCAAAGTTGAAGCCAAGAAGGAAGAGGCTGAAGATAAGAAAAAAGTCCCCACCCCAGAGAAGGAGGCT
CCTGCCAAGGTGGAGGTGAAGGAAGACGCTAAACCCAAAGAAAAGACAGAGGTAGCCAAGAAGGAACCAG
ATGATGCCAAGGCCAAGGAACCCAGCAAACCAGCAGAGAAGAAGGAGGCAGCACCGGAGAAAAAAGACAC
CAAGGAGGAGAAGGCCAAGAAGCCTGAGGAGAAACCCAAGACAGAGGCCAAAGCCAAGGAAGATGACAAG
ACCCTCTCAAAAGAGCCTAGCAAGCCTAAGGCAGAAAAGGCTGAAAAATCCTCCAGCACAGACCAAAAAG
ACAGCAAGCCTCCAGAGAAGGCCACAGAAGACAAGGCCGCCAAGGGGAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

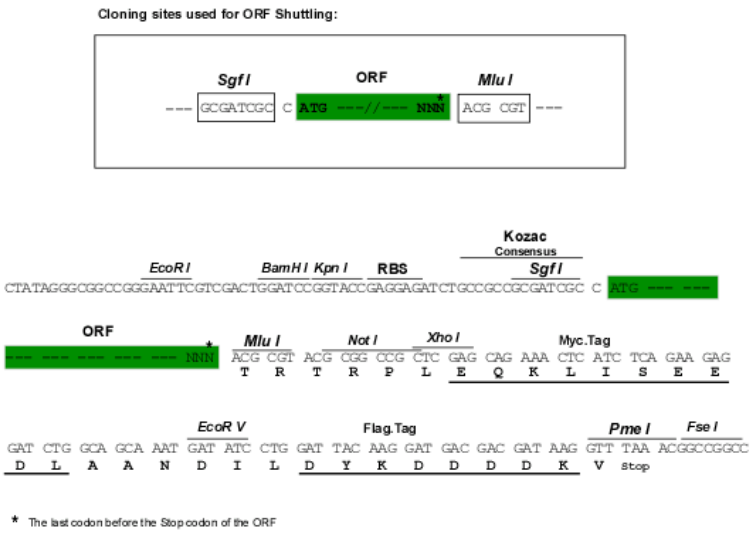
>RC213487 representing NM_021076
Red=Cloning site Green=Tags(s)

MMSFGGADALLGAPFAPLHGGGSLHYALARKGGAGGTRSAAGSSSGFHSWTRTSVSSVSASPSRFRGAGA
ASSTDSLDTLSNGPEGCMVAVATSRSEKEQLQALNDRFAGYIDKVRQLEAHNRSLEGEAAALRQQQAGRS
AMGELYEREVREMRGAVLRLGAARGQLRLEQEHLLEDIAHVRQRLDDEARQREEAEAAARALARFAQEAE
AARVDLQKKAQALQEECGYLRRXHQEEVGELLGQIQGSGAAQAQMQAETRDALKCDVTSALREIRAQLEG
HAVQSTLQSEEWFRVRLDRLSEAAKVNTDAMRSAQEEITEYRRQLQARTTELEALKSTKDSLERQRSELE
DRHQADIASYQEAIQQLDAELRNTKWEMAAQLREYQDLLNVKMALDIEIAAYRKLLEGEECRIGFGPIPF
SLPEGLPKIPSVSTHIKVKSEEKIKVVEKSEKETVIVEEQTEETQVTEEVTEEEEKEAKEEEGKEEEGGE
EEEAEGGEEETKSPPAEEAASPEKEAKSPVKEEAKSPAEAKSPEKEEAKSPAEVKSPEKAKSPAKEEAKS
PPEAKSPEKEEAKSPAEVKSPEKAKSPAKEEAKSPAEAKSPEKAKSPVKEEAKSLAEAKSPVKEEAKSPA
EVKSPEKAKSPTKEEAKSPEKAKSPEKEEAKSPEKAKSPVKAEAKSPEKAKSPVKAEAKSPEKAKSPVKE
EAKSPEKAKSPVKEEAKSPEKAKSPVKEEAKTPEKAKSPVKEEAKSPEKAKSPEKAKTLDVKSPEAKTPA
KEEARSPADKFPEKAKSPVKEEVKSPEKAKSPLKEDAKAPEKEIPKKEEVKSPVKEEEKPQEVKVKEPPK
KAEEEKAPATPKTEEKKDSKKEEAPKKEAPKPKVEEKKEPAVEKPKESKVEAKKEEAEDKKKVPTPEKEA
PAKVEVKEDAKPKEKTEVAKKEPDDAKAKEPSKPAEKKEAAPEKKDTKEEKAKKPEEKPKTEAKAKEDDK
TLSKEPSKPKAEKAEKSSSTDQKDSKPPEKATEDKAAKGK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

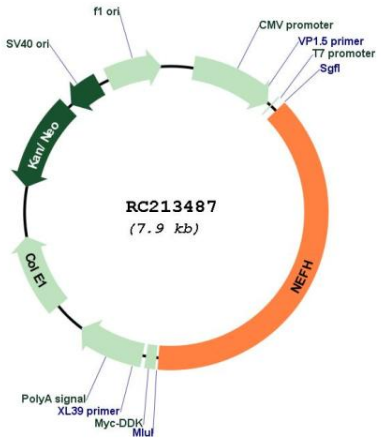


ACCN:	NM_021076
ORF Size:	3060 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own 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_021076.4
RefSeq Size:	3695 bp
RefSeq ORF:	3063 bp

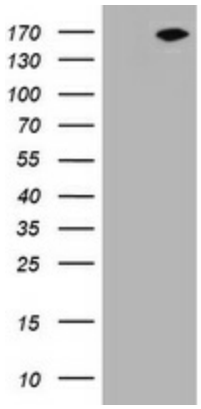
Locus ID:	4744
UniProt ID:	P12036
Cytogenetics:	22q12.2
Domains:	filament
Protein Families:	Druggable Genome
Protein Pathways:	Amyotrophic lateral sclerosis (ALS)
MW:	111.7 kDa

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 heavy neurofilament protein. This protein is commonly used as a biomarker of neuronal damage and susceptibility to amyotrophic lateral sclerosis (ALS) has been associated with mutations in this gene. [provided by RefSeq, Oct 2008]

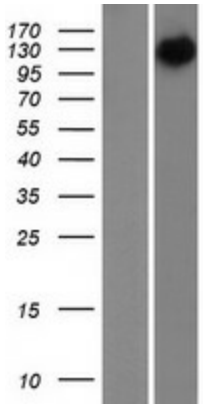
Product images:



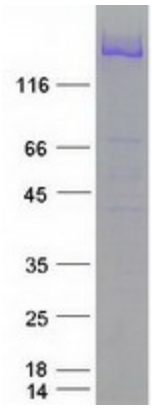
Circular map for RC213487



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NEFH (Cat# RC213487, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NEFH (Cat# [TA801161]). Positive lysates [LY412101] (100ug) and [LC412101] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY412101]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213487 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NEFH protein (Cat# [TP313487]). The protein was produced from HEK293T cells transfected with NEFH cDNA clone (Cat# RC213487) using MegaTran 2.0 (Cat# [TT210002]).