

## Product datasheet for **RC209405**

### **NFS1 (NM\_021100) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NFS1 (NM_021100) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NFS1
Synonyms:	COXPD52; HUSSY-08; IscS; NIFS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC209405 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCTGCTCCGAGCCGCTTGGAGCGGGCGGCAGTGGCGGTGACAGCGGCTCCAGGGCCGAAGCCCGCGG  
 CGCCCACTCGGGGCTGCGCCTGCGCGTTGGAGACCGTGCTCCTCAGTCTGCGGTTCCCGCAGATACAGC  
 CGCTGCCCCGGAGGTGGGGCCAGTGCTGCGACCTCTATATGGATGTGCAAGCTACAACCTCTGGAC  
 CCCCAGGTGCTTGTGATGCCATGCTCCCTTACCTAATTAATACTACTATGGAAACCCACACTCCCGGACACATG  
 CTTATGGTGGGAGAGTGAGGCAGCCATGGAACGTGCTCGTCAGCAAGTAGCATCTCTGATTGGAGCTGA  
 TCCTCGTGAGATCATTTTTACTAGTGGTGTACTGAATCCAACAACATAGCAATTAAGGGGGTGGCCGA  
 TTCTACAGGTCACGAAAAAGCACTTGATCACCACCCAGACAGAACACAATGTGTCTTGGACTCCTGCC  
 GTTCACTGGAAGCTGAGGGCTTTCAGGTCACCTACCTCCCAGTGCAGAAGAGTGGGATCATTGACCTAAA  
 GGAAGTAGAGGCTGCTATCCAGCCAGATACTAGCCTGGTGTGAGTCACTGTGAACAATGAGATTGGA  
 GTGAAGCAGCCTATTGCAGAAATAGGGCGGATTTCAGATTCCAGAAAGGTATATTTCCATACTGATGCAG  
 CCCAGGCTGTTGGAAAAATCCCCTTGATGTCAATGACATGAAAAATTGATCTCATGAGCATTAGTGGTCA  
 CAAAATCTACGGTCCCAAAGGGGTTGGTGCCATCTACATCCGTGCGCCGGCCCGTGTGCGTGTGGAGGCC  
 CTGCAGAGTGGAGGGGGCAGGAGCGGGGTATGCGGTCTGGGACAGTGCCACACCCCTTAGTGGTGGGGC  
 TGGGGGCTGCGTGTGAGGTGGCAGCAAGAGATGGAGTATGACCACAAGCGAATCTCAAAGTTGTCAGA  
 GCGGCTGATACAGAATAAATGAAGAGCCTTCCAGATGTGGTGTGAATGGGGACCCTAAGCACCATTAT  
 CCCGGCTGATCAACCTCTCCTTTCATATGTGGAAGGGGAAAGTCTGCTGATGGCACTGAAGGACGTTG  
 CCTTATCCTCAGGGAGTGCCTGCACCTCTGCATCCCTGGAGCCCTTTATGTGCTTAGAGCAATTGGCAC  
 TGATGAGGATTTAGCGCACTCTTCTATCAGGTTTGGAAATGGCCGCTTCACTACAGAGGAGGAAGTGGAC  
 TACACAGTGGAGAAATGCATTGAGCATGTGAAGCGTCTTCGAGAAATGAGCCCTCTCTGGGAGATGGTTC  
 AGGATGGCATTGACCTCAAGAGCATCAAGTGGACCCAACAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC209405 protein sequence  
 Red=Cloning site Green=Tags(s)

MLLRAAWRRAAVAVTAAPGPKPAAPTRGLRLRVGDRAPQSAVPADTAAAEVGPVLRPLYMDVQATTPLD  
 PRVLDAMPLPYLINYYGNPHSRTHAYGWESEAAMERARQQVASLIGADPREIIFTSGATESNNIAIKGVAR  
 FYRSRKKHLITTQTEHKCVLDSCRSLAEGFQVTYLPVQKSGIIDLKELEAAIQPDTSLVSVMTVNNEIG  
 VKQPIAEIGRICSSRKVYFHTDAAQAVGKIPLDVNDMKIDLMSISGHKIYGPKGVAIYIRRRPRVRVEA  
 LQSGGGQERGMRSQTVPTPLVVGLGAACEVAQQEMEYDHKRISKLSERLIQNIKMLPDVVMNGDPKHYY  
 PGCINLSFAYVEGESLLMALKDVALSSGSACTSASLEPSYVLRRAIGTDEDLAHSSIRFGIGRFTTEEEVD  
 YTEKCIQHVKRLREMSPLWEMVQDGDIDLSIKWTQH

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6357\\_e05.zip](https://cdn.origene.com/chromatograms/mk6357_e05.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

**ACCN:** NM\_021100

**ORF Size:** 1371 bp

**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).

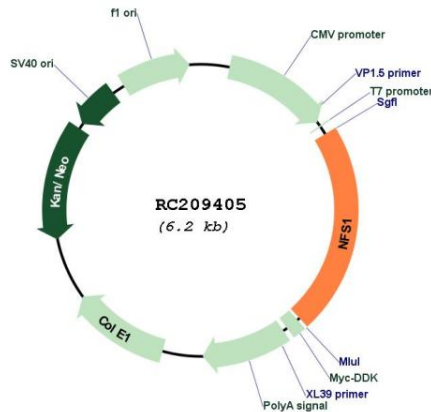
**Reconstitution Method:**

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.

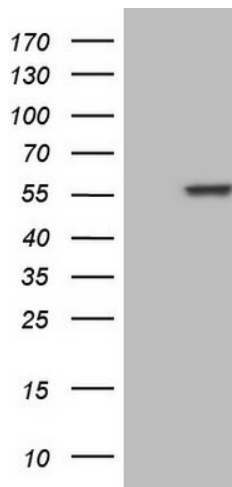
**RefSeq:** [NM\\_021100.5](#)  
**RefSeq Size:** 2385 bp  
**RefSeq ORF:** 1374 bp  
**Locus ID:** 9054  
**UniProt ID:** [Q9Y697](#)  
**Cytogenetics:** 20q11.22  
**Domains:** aminotran\_5  
**Protein Pathways:** Thiamine metabolism  
**MW:** 50.2 kDa

**Gene Summary:** Iron-sulfur clusters are required for the function of many cellular enzymes. The proteins encoded by this gene supply inorganic sulfur to these clusters by removing the sulfur from cysteine, creating alanine in the process. This gene uses alternate in-frame translation initiation sites to generate mitochondrial forms and cytoplasmic/nuclear forms. Selection of the alternative initiation sites is determined by the cytosolic pH. The encoded proteins belong to the class-V family of pyridoxal phosphate-dependent aminotransferases. Alternatively spliced transcript variants have been described. [provided by RefSeq, Nov 2010]

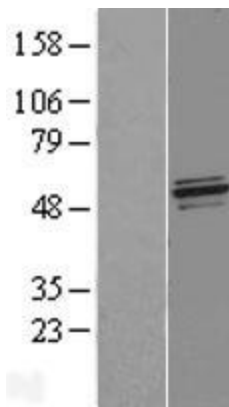
### Product images:



Circular map for RC209405



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NFS1 (Cat# RC209405, 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-NFS1 (Cat# [TA805491]). Positive lysates [LY412089] (100ug) and [LC412089] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY412089]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209405 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).