

Product datasheet for **RC210660**

NIT2 (NM_020202) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NIT2 (NM_020202) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NIT2
Synonyms:	HEL-S-8a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210660 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGACCTCTTTCCGCTTGGCCCTCATCCAGCTTCAGATTCTTCCATCAAATCAGATAACGTCACCTCGCG
CTTGTAGCTTCATCCGGGAGGCAGCAACGCAAGGAGCCAAAATAGTTTCTTTGCCGGAATGCTTTAATTC
TCCATATGGAGCGAAATATTTTCTGAATATGCAGAGAAAATTCCTGGTGAATCCACACAGAAGCTTTCT
GAAGTAGCAAAGGAATGCAGCATATATCTCATTGGAGGCTCTATCCCTGAAGAGGATGCTGGGAAATTAT
ATAACACCTGTGCTGTGTTTGGCCTGATGGAACCTTACTAGCAAAGTATAGAAAGATCCATCTGTTTGA
CATTGATGTTCTGGAAAAATTACATTTCAAGAACTCTAAAACATTGAGTCCGGGTGATAGTTTCTCCACA
TTTGATACTCCTTACTGCAGAGTGGGTCTGGGCATCTGCTACGACATGCGGTTTGCAGAGCTTGACAAA
TCTACGCACAGAGAGGCTGCCAGCTGTTGGTATATCCAGGAGCTTTAATCTGACCACTGGACCAGCCCA
TTGGGAGTTACTTCAGCGAAGCCGGGCTGTTGATAATCAGGTGTATGTGGCCACAGCCTCTCCTGCCCGG
GATGACAAAGCCTCCTATGTTGCCTGGGGACACAGCACCGTGGTGAACCTTGGGGGAGGTTCTAGCCA
AAGCTGGCACAGAAGAAGCAATCGTGTATTCAGACATAGACCTGAAGAAGCTGGCTGAAATACGCCAGCA
AATCCCGTTTTTAGACAGAAGCGATCAGACCTCTATGCTGTGGAGATGAAAAAGCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC210660 protein sequence
 Red=Cloning site Green=Tags(s)

MTSFRLLAIQLQISSIKSDNVTRACSFIREAATQGAKIVSLPECFNSPYGAKYFPEYAEKIPGESTQKLS
 EVAKECSIYLIIGGSIPEEDAGKLYNTCAVFGPDGTL LAKYRKIHLFDIDVPGKITFQESKTLSPGDSFST
 FDTPYCRVGLGICYDMRFAELAQIYAQRGCQLLVYPGAFNLTTGPAHWELLQRSRAVDNQVYVATASPAR
 DDKASYVAWGHSTVVNPWGEVLAKAGTEEAIVYSDIDLKLAETIRQQIPVFRQKRSPLYAVEMKKP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6071_f08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_020202

ORF Size: 828 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_020202.5](#)

RefSeq Size: 1271 bp

RefSeq ORF: 831 bp

Locus ID: 56954

UniProt ID: [Q9NQR4](#)

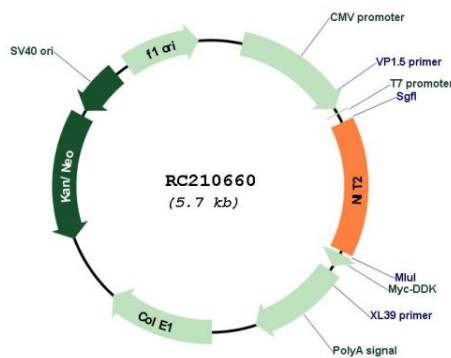
Cytogenetics: 3q12.2

Domains: CN_hydrolase

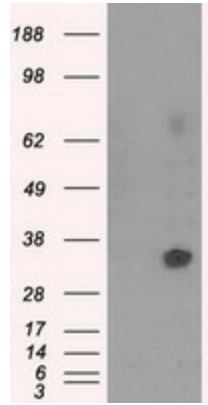
MW: 30.6 kDa

Gene Summary: Has a omega-amidase activity. The role of omega-amidase is to remove potentially toxic intermediates by converting alpha-ketoglutaramate and alpha-ketosuccinamate to biologically useful alpha-ketoglutarate and oxaloacetate, respectively. Overexpression decreases the colony-forming capacity of cultured cells by arresting cells in the G2 phase of the cell cycle. [UniProtKB/Swiss-Prot Function]

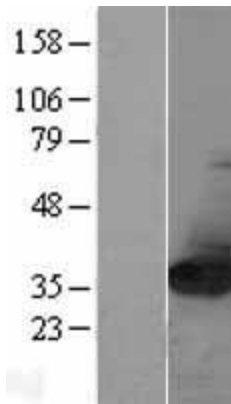
Product images:



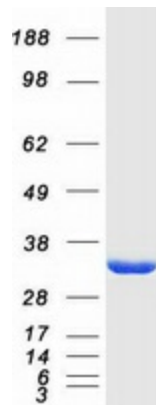
Circular map for RC210660



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NIT2 (Cat# RC210660, 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-NIT2(Cat# [TA501109]). Positive lysates [LY402761] (100ug) and [LC402761] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY402761]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210660 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NIT2 protein (Cat# [TP310660]). The protein was produced from HEK293T cells transfected with NIT2 cDNA clone (Cat# RC210660) using MegaTran 2.0 (Cat# [TT210002]).