

Product datasheet for RC212031

ISCU (NM_014301) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: ISCU (NM_014301) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: ISCU
Synonyms: 2310020H20Rik; HML; hnifU; ISU2; NIFU; NIFUN
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RC212031 representing NM_014301
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGTTCTCATTGACATGAGTGTAGACCTTTCTACTCAGTTGTTGATCATTATGAAAATCCTAGAAACG
TGGGGTCCCTTGACAAGACATCTAAAAATGTTGGAAGTGGACTGGTGGGGCTCCAGCATGTGGTACGT
AATGAAATTACAGATTCAGTGGATGAAAAGGGGAAGATTGTGGATGCTAGGTTTAAAACATTTGGCTGT
GGTCCGCAATTGCCTCCAGCTCATTAGCCACTGAATGGGTGAAAGGAAAGACGGTGGAGGAAGCCTTGA
CTATCAAAAACACAGATATCGCCAAGGAGCTCTGCCTTCTCCCGTAAAAGTGCCTGCTCCATGCTGGC
TGAAGATGCAATCAAGGCCGCCCTGGTGATTACAAATTGAAACAAGAACCACAAAAAGGAGAGGCAGAG
AAGAAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC212031 representing NM_014301
Red=Cloning site Green=Tags(s)

MVLIDMSVDLSTQVVDHYENPRNVGSLDKTSKNVGTGLVGAPACGDMKLQIQVDEKGIIVDARFKTFGC
GSAIASSSLATEWVKGTVEEALTIKNTDIAKELCLPPVKLHCSMLAEDAIIKAALADYKLIKQEPKKGAE
KK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1453_e10.zip

Restriction Sites: SgfI-MluI

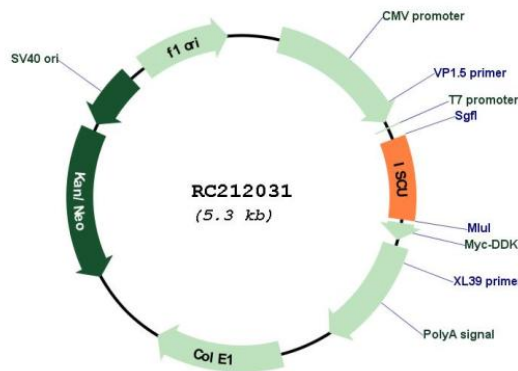


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Cloning Scheme:



Plasmid Map:



ACCN: NM_014301

ORF Size: 426 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_014301.4](#)

RefSeq Size: 1086 bp

RefSeq ORF: 429 bp

Locus ID: 23479

UniProt ID: [Q9H1K1](#)

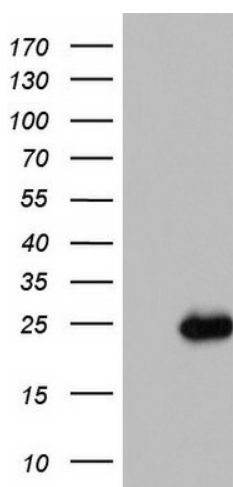
Cytogenetics: 12q23.3

Domains: NifU_N

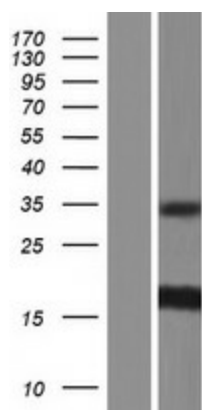
MW: 15.1 kDa

Gene Summary: This gene encodes a component of the iron-sulfur (Fe-S) cluster scaffold. Fe-S clusters are cofactors that play a role in the function of a diverse set of enzymes, including those that regulate metabolism, iron homeostasis, and oxidative stress response. Alternative splicing results in transcript variants encoding different protein isoforms that localize either to the cytosol or to the mitochondrion. Mutations in this gene have been found in patients with hereditary myopathy with lactic acidosis. A disease-associated mutation in an intron may activate a cryptic splice site, resulting in the production of a splice variant encoding a putatively non-functional protein. A pseudogene of this gene is present on chromosome 1. [provided by RefSeq, Feb 2016]

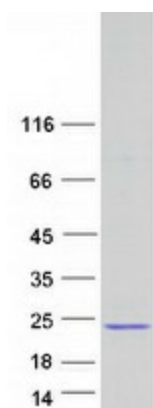
Product images:



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ISCU (Cat# RC212031, 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-ISCU (Cat# [TA803397]). Positive lysates [LY429414] (100ug) and [LC429414] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY415371]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212031 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ISCU protein (Cat# [TP312031]). The protein was produced from HEK293T cells transfected with ISCU cDNA clone (Cat# RC212031) using MegaTran 2.0 (Cat# [TT210002]).