

Product datasheet for **MG201379**

Iscu (NM_025526) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Iscu (NM_025526) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Iscu
Synonyms: 2310020H20Rik; AA407971; Nifu; Nifun
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG201379 representing NM_025526
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCGCGGCCACGGGAGCTGGCCGTCTGAGGCGGGCGGCTCGGCGCTGCTGCTGCGGAGCCCGCGCC
 TGCCCGCCGGGAGCTGTCGGCTCCGGCCAGGCTCTACCACAAGAAGGTTGTGGATCATTATGAAAACCC
 TCGGAACGTGGGATCCCTTGACAAGACATCTAAAAATGTTGGAACCGATTGGTGGGGCTCCGGCATGT
 GGTGACGTGAACTGCAGATCCAGGTGGATGAAAAGGGAAGATTGTGGACCCAGATTCAAAACAT
 TTGGCTGCGGCTCCGCCATTGCCTCCAGCTCCTTAGCCACAGAGTGGGTAAGGGGAAAACGGTGGAGGA
 AGCCCTGACCATCAAAAACCCGACATCGCCAAGGAGCTCTGCCTGCCGCTGTGAACTGCACTGCTCC
 ATGCTGGCAGAAGACGCCATCAAGGCCGCCCTGGCTGACTACAACTGAAGCAAGAGTCCAAGAAGGAGG
 AGCCAGAGAAGCAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG201379 representing NM_025526
 Red=Cloning site Green=Tags(s)

MAAATGAGRLRRAASALLLRSPRLPARELSAPARLYHKKVVDHYENPRNVGSLDKTSKNVGTGLVGAPAC
 GDVMKLQIQVDEKGIIVDARFKTFGCGSAIASSSLATEWVKGTVEEALTIKNTDIAKELCLPPVKLHCS
 MLAEDA IKAALADYKQESKKEPEKQ

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

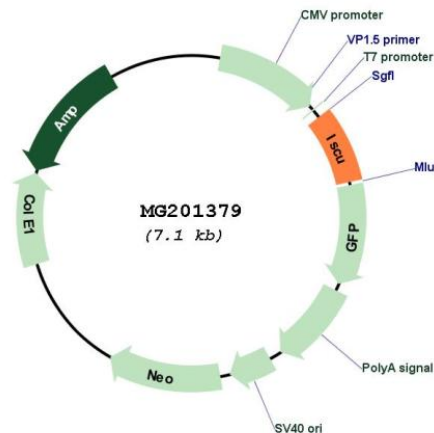


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Cloning Scheme:



Plasmid Map:



ACCN: NM_025526

ORF Size: 504 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:	<u>NM_025526.5</u>
RefSeq Size:	885 bp
RefSeq ORF:	507 bp
Locus ID:	66383
UniProt ID:	<u>Q9D7P6</u>
Cytogenetics:	5 F
Gene Summary:	Scaffold protein for the de novo synthesis of iron-sulfur (Fe-S) clusters within mitochondria, which is required for maturation of both mitochondrial and cytoplasmic [2Fe-2S] and [4Fe-4S] proteins. First, a [2Fe-2S] cluster is transiently assembled on the scaffold protein ISCU. In a second step, the cluster is released from ISCU, transferred to a glutaredoxin GLRX5, followed by the formation of mitochondrial [2Fe-2S] proteins, the synthesis of [4Fe-4S] clusters and their target-specific insertion into the recipient apoproteins. Cluster assembly on ISCU depends on the function of the cysteine desulfurase complex NFS1-LYRM4/ISD11, which serves as the sulfur donor for cluster synthesis, the iron-binding protein frataxin as the putative iron donor, and the electron transfer chain comprised of ferredoxin reductase and ferredoxin, which receive their electrons from NADH (By similarity).[UniProtKB/Swiss-Prot Function]