10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# ISCU Antibody (C-term)

**Affinity Purified Rabbit Polyclonal Antibody (Pab)**
**Catalog # AP20142b**

## Specification

### ISCU Antibody (C-term) - Product Information

| | |
|---|---|
| Application | **WB,E** |
| Primary Accession | Q9H1K1 |
| Other Accession | NP_055116.1 |
| Reactivity | **Human, Mouse** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **17999** |
| Antigen Region | **138-167** |

### ISCU Antibody (C-term) - Additional Information

**Gene ID** 23479

**Other Names**
Iron-sulfur cluster assembly enzyme ISCU, mitochondrial, NifU-like N-terminal domain-containing protein, NifU-like protein, ISCU, NIFUN

**Target/Specificity**
This ISCU antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 138-167 amino acids from the C-terminal region of human ISCU.

**Dilution**
WB~~1:1000

**Format**
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
ISCU Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### ISCU Antibody (C-term) - Protein Information

**Name** ISCU (HGNC:29882)

**Synonyms** NIFUN

**Function** [Isoform 1]: Mitochondrial scaffold protein, of the core iron-sulfur cluster (ISC) assembly complex, that provides the structural architecture on which the [2Fe-2S] clusters are assembled (PubMed:34824239). The core iron-sulfur cluster (ISC) assembly complex is involved in the de novo synthesis of a [2Fe-2S] cluster, the first step of the mitochondrial iron-sulfur protein biogenesis. This process is initiated by the cysteine desulfurase complex (NFS1:LYRM4:NDUFAB1) that produces persulfide which is delivered on the scaffold protein ISCU in a FXN-dependent manner. Then this complex is stabilized by FDX2 which provides reducing equivalents to accomplish the [2Fe-2S] cluster assembly. Finally, the [2Fe-2S] cluster is transferred from ISCU to chaperone proteins, including HSCB, HSPA9 and GLRX5 (PubMed:30031876, PubMed:34824239, PubMed:24971490, PubMed:29576242) (Probable). Exists as two slow interchanging conformational states, a structured (S) and disordered (D) form (PubMed:23940031). May modulate NFS1 desulfurase activity in a zinc-dependent manner (PubMed:30031876). Modulates the interaction between FXN and the cysteine desulfurase complex (PubMed:29576242).

**Cellular Location**
[Isoform 1]: Mitochondrion

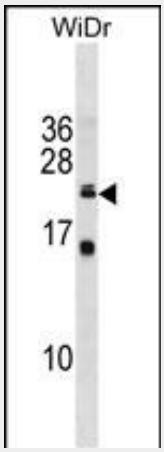
**Tissue Location**
Detected in heart, liver, skeletal muscle, brain, pancreas, kidney, lung and placenta.

## ISCU Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

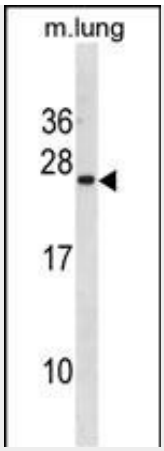
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## ISCU Antibody (C-term) - Images




ISCU Antibody (C-term) (Cat. #AP20142b) western blot analysis in WiDr cell line lysates (35ug/lane).This demonstrates the ISCU antibody detected the ISCU protein (arrow).

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ISCU Antibody (C-term) (Cat. #AP20142b) western blot analysis in mouse lung tissue lysates (35ug/lane).This demonstrates the ISCU antibody detected the ISCU protein (arrow).

**ISCU Antibody (C-term) - Background**

Iron-sulfur (Fe-S) clusters are necessary for several mitochondrial enzymes and other subcellular compartment proteins. They contain sulfur and iron, and are created via several steps that include cysteine desulfurases, iron donors, chaperones, and scaffold proteins. This gene encodes the two isomeric forms, ISCU1 and ISCU2, of the Fe-S cluster scaffold protein. Mutations in this gene have been found in patients with myopathy with severe exercise intolerance and myoglobinuria.

**ISCU Antibody (C-term) - References**

Chen, Z., et al. Oncogene 29(30):4362-4368(2010)
Chan, S.Y., et al. Cell Metab. 10(4):273-284(2009)
Kollberg, G., et al. Brain 132 (PT 8), 2170-2179 (2009) :
Huang, J., et al. J. Biol. Inorg. Chem. 13(5):825-836(2008)
Mochel, F., et al. Am. J. Hum. Genet. 82(3):652-660(2008)

**ISCU Antibody (C-term) - Citations**

- The age-related changes and differences in energy metabolism and glutamate-glutamine recycling in the d-gal-induced and naturally occurring senescent astrocytes in vitro.