

For Research Use Only

# ISCU Polyclonal antibody

Catalog Number: 14812-1-AP

Featured Product

25 Publications



## Basic Information

### Catalog Number:

14812-1-AP

### Size:

700 ug/ml

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG6562

### GenBank Accession Number:

BC061903

### GeneID (NCBI):

23479

### UNIPROT ID:

Q9H1K1

### Full Name:

iron-sulfur cluster scaffold homolog  
(E. coli)

### Calculated MW:

18 kDa

### Observed MW:

14-15 kDa, 18-19 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:500-1:1000

IP 0.5-4.0 ug for 1.0-3.0 mg of total  
protein lysate

IHC 1:50-1:500

IF/ICC 1:50-1:500

## Applications

### Tested Applications:

WB, IHC, IF/ICC, IP, ELISA

### Cited Applications:

WB, IHC, IF

### Species Specificity:

human, mouse, rat

### Cited Species:

human, mouse, rat

### Positive Controls:

WB : mouse heart tissue, Raji cells, A549 cells, HeLa  
cells, COLO 320 cells

IP : mouse heart tissue,

IHC : human endometrial cancer tissue, human lung  
cancer tissue

IF/ICC : MCF-7 cells,

**Note-IHC: suggested antigen retrieval with  
TE buffer pH 9.0; (\*) Alternatively, antigen  
retrieval may be performed with citrate  
buffer pH 6.0**

## Background Information

Iron-sulfur (Fe-S) clusters are required for the functions of mitochondrial aconitase, mammalian iron regulatory protein 1, and many other proteins in multiple subcellular compartments. Mitochondrial and cytosolic isoforms of the human Fe-S cluster scaffold protein, iron-sulfur cluster assembly enzyme (ISCU), is involved in activation of iron uptake, redistribution of intracellular iron, and decreased utilization of iron in Fe-S proteins. Defects in ISCU gene are the cause of myopathy with exercise intolerance Swedish type (MEIS), which is characterized by lifelong severe exercise intolerance (PMID: 18304497). Two ISCU isoforms ISCU1 (cytosolic, 15 kDa) and ISCU2 (mitochondrial, 18 kDa), were produced by alternative splicing, and ISCU2 is considered the canonical isoform1. ISCU2 protein is rapidly processed upon maturation (PMID: 11060020). Proteintech's ISCU antibody 14812-1-AP is raised against the full-length ISCU2 and is expected to detect 14 kDa, 15 kDa and 18-19 kDa bands which has been reported in the previous observation (PMID: 11060020).

## Notable Publications

Author	Pubmed ID	Journal	Application
Rufeng Zhang	31530015	FASEB J	WB
Shashank Masaldan	28888202	Redox Biol	WB
Yuki Funauchi	26560363	Sci Rep	WB, IHC, IF

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

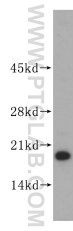
T: 4006900926

E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)

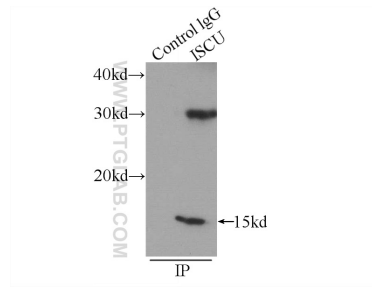
W: [ptgcn.com](http://ptgcn.com)

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

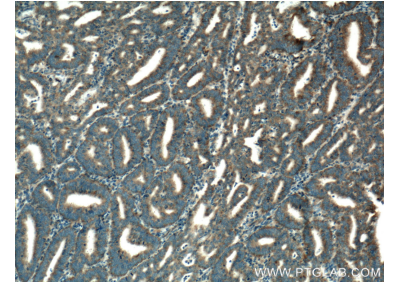
## Selected Validation Data



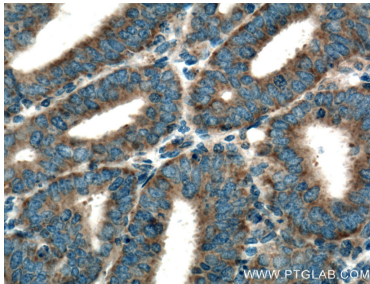
mouse heart tissue were subjected to SDS PAGE followed by western blot with 14812-1-AP (ISCU antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours.



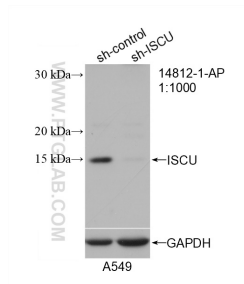
IP result of anti-ISCU (IP:14812-1-AP, 3ug; Detection:14812-1-AP 1:500) with mouse heart tissue lysate 4000ug.



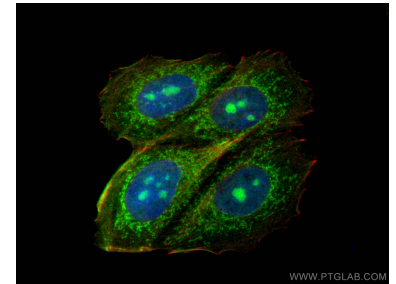
Immunohistochemical analysis of paraffin-embedded human endometrial cancer tissue slide using 14812-1-AP (ISCU Antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human endometrial cancer tissue slide using 14812-1-AP (ISCU Antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



WB result of ISCU antibody (14812-1-AP; 1:1000; incubated at room temperature for 1.5 hours) with sh-Control and sh-ISCU transfected A549 cells.



Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using ISCU antibody (14812-1-AP) at dilution of 1:200 and CoraLite@488-Conjugated Goat Anti-Rabbit IgG(H+L), CL594-phalloidin (red).