For Research Use Only

ISCU Polyclonal antibody

Catalog Number:14812-1-AP Featured Product 22 Publications

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Basic Information

Catalog Number:
14812-1-AP

Size:
150ul , Concentration: 500 μg/ml by Nanodrop and 293 μg/ml by Bradford method using BSA as the standard;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG6562

GenBank Accession Number:
BC061903

GeneID (NCBI):
23479

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 IP and 1:500-1:1000 for WB
IHC 1:50-1:500
IF 1:20-1:200

Applications

Tested Applications:
IF, IHC, IP, WB, ELISA

Cited Applications:
IF, IHC, WB

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, rat

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

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 : MCF-7 cells,

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

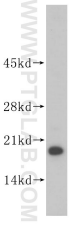
Storage

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

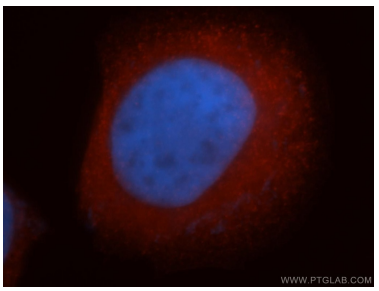
*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

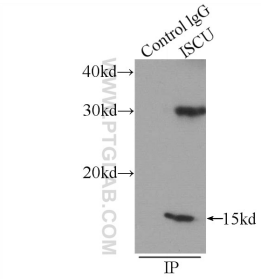
Selected Validation Data



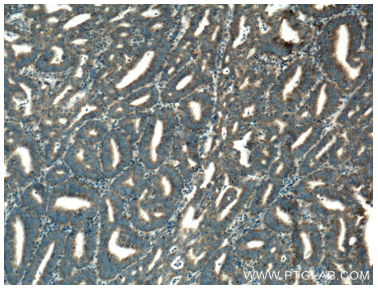
mouse heart tissue were subjected to SDS PAGE followed by western blot with 14812-1-AP (ISCU antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours.



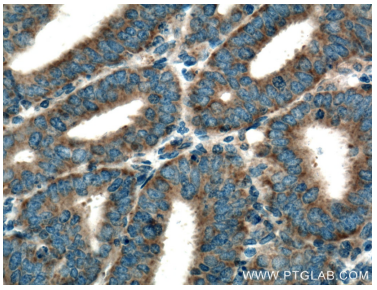
Immunofluorescent analysis of MCF-7 cells, using ISCU antibody 14812-1-AP at 1:50 dilution and Rhodamine-labeled goat anti-rabbit IgG (red). Blue pseudocolor = DAPI (fluorescent DNA dye).



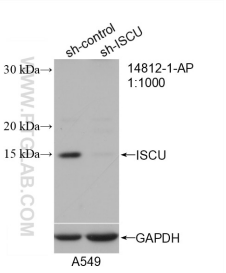
IP Result of anti-ISCU (IP:14812-1-AP, 3ug; Detection:14812-1-AP 1:500) with mouse heart tissue lysate 4000ug.



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.