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NFS1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16412c

Specification

NFS1 Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	Q9Y697
Other Accession	Q99P39, Q9Z1J3, NP_066923.3
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**50196**
Antigen Region	**121-149**

NFS1 Antibody (Center) - Additional Information

Gene ID 9054

Other Names
Cysteine desulfurase, mitochondrial, NFS1, NIFS

Target/Specificity
This NFS1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 121-149 amino acids from the Central region of human NFS1.

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
NFS1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

NFS1 Antibody (Center) - Protein Information

Name NFS1 {ECO:0000303|PubMed:18650437, ECO:0000312|HGNC:HGNC:15910}

Function [Isoform Mitochondrial]: Cysteine desulfurase, of the core iron-sulfur cluster (ISC)

assembly complex, that catalyzes the desulfuration of L-cysteine to L-alanine, as component of the cysteine desulfurase complex, leading to the formation of a cysteine persulfide intermediate at the active site cysteine residue and participates in the [2Fe-2S] clusters assembly on the scaffolding protein ISCU (PubMed:29097656, PubMed:31101807, PubMed:18650437). The persulfide is then transferred on the flexible Cys loop from the catalytic site of NFS1 to the surface of NFS1 (PubMed:29097656). After the NFS1-linked persulfide sulfur is transferred to one of the conserved Cys residues of the scaffold, a reaction assisted by FXN (By similarity). 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 (By similarity).

Cellular Location
[Isoform Mitochondrial]: Mitochondrion

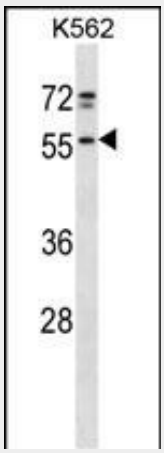
Tissue Location
Predominantly expressed in heart and skeletal muscle. Also found in brain, liver and pancreas

NFS1 Antibody (Center) - 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

NFS1 Antibody (Center) - Images



NFS1 Antibody (Center) (Cat. #AP16412c) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the NFS1 antibody detected the NFS1 protein (arrow).

NFS1 Antibody (Center) - Background

Iron-sulfur clusters are required for the function of many cellular enzymes. The proteins encoded by this gene supply inorganic sulfur to these clusters by removing the sulfur from cysteine, creating alanine in the process. This gene uses alternate in-frame translation initiation sites to generate mitochondrial forms and cytoplasmic/nuclear forms. Selection of the alternative initiation sites is determined by the cytosolic pH. The encoded proteins belong to the class-V family of pyridoxal phosphate-dependent aminotransferases. Alternatively spliced transcript variants have been described.

NFS1 Antibody (Center) - References

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