

CISD1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP55357

Specification

CISD1 Polyclonal Antibody - Product Information

Application IHC-P, IHC-F, IF, ICC, E

Primary Accession <u>O9NZ45</u>

Reactivity
Host
Clonality
Calculated MW
Physical State

Rat, Dog, Bovine
Rabbit
Polyclonal
12 KDa
Liquid

Immunogen KLH conjugated synthetic peptide derived

laG

from human CISD1

Epitope Specificity 51-108/108

Isotype
Purity
affinity purified by Protein A

Buffer 0.01M TBS (pH7.4) with 1% BSA, 0.02%

SUBCELLULAR LOCATION Proclin300 and 50% Glycerol.
Mitochondrion outer membrane.

SIMILARITY
Important Note
Belongs to the CISD protein family.
This product as supplied is intended for research use only, not for use in human,

therapeutic or diagnostic applications.

Background Descriptions

This gene encodes a protein with a CDGSH iron-sulfur domain and has been shown to bind a redox-active [2Fe-2S] cluster. The encoded protein has been localized to the outer membrane of mitochondria and is thought to play a role in regulation of oxidation. Genes encoding similar proteins are located on chromosomes 4 and 17, and a pseudogene of this gene is located on chromosome 2. [provided by RefSeq, Feb 2012]

CISD1 Polyclonal Antibody - Additional Information

Gene ID 55847

Other Names

CDGSH iron-sulfur domain-containing protein 1, MitoNEET, CISD1, C10orf70, ZCD1

Target/Specificity

Expression is reduced in cells derived from cystic fibrosis patients.

Dilution

IHC-P~~N/A<br \><span class</pre>

="dilution_IHC-F">IHC-F~~N/A<br \><span class

="dilution_IF">IF \sim 1:50 \sim 200<br \>ICC \sim N/A<br \>E \sim N/A



Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

CISD1 Polyclonal Antibody - Protein Information

Name CISD1

Synonyms C10orf70, ZCD1

Function

L-cysteine transaminase that catalyzes the reversible transfer of the amino group from L-cysteine to the alpha-keto acid 2- oxoglutarate to respectively form 2-oxo-3-sulfanylpropanoate and Lglutamate (PubMed: 36194135). The catalytic cycle occurs in the presence of pyridoxal 5'-phosphate (PLP) cofactor that facilitates transamination by initially forming an internal aldimine with the epsilon-amino group of active site Lys-55 residue on the enzyme (PLP- enzyme aldimine), subsequently displaced by formation of an external aldimine with the substrate amino group (PLP-L-cysteine aldimine). The external aldimine is further deprotonated to form a carbanion intermediate, which in the presence of 2-oxoglutarate regenerates PLP yielding final products 2-oxo-3-sulfanylpropanoate and L-glutamate. The proton transfer in carbanion intermediate is suggested to be controlled by the active site lysine residue, whereas PLP stabilizes carbanion structure through electron delocalization, also known as the electron sink effect (PubMed: 36194135). Plays a key role in regulating maximal capacity for electron transport and oxidative phosphorylation (By similarity). May be involved in iron-sulfur cluster shuttling and/or in redox reactions. Can transfer the [2Fe-2S] cluster to an apo-acceptor protein only when in the oxidation state, likely serving as a redox sensor that regulates mitochondrial iron-sulfur cluster assembly and iron trafficking upon oxidative stress (PubMed: 17584744, PubMed:21788481, PubMed:23758282).

Cellular Location

Mitochondrion outer membrane; Single-pass type III membrane protein

Tissue Location

Expression is reduced in cells derived from cystic fibrosis patients.

CISD1 Polyclonal Antibody - Protocols

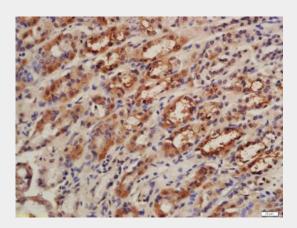
Provided below are standard protocols that you may find useful for product applications.

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



• Cell Culture

CISD1 Polyclonal Antibody - Images



Tissue/cell: rat stomach tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-CISD1 Polyclonal Antibody, Unconjugated(bs-13959R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining