

CISD1 Antibody (clone AT1A8)
Mouse Monoclonal Antibody
Catalog # ALS15893**Specification**

CISD1 Antibody (clone AT1A8) - Product Information

Application	WB, IHC
Primary Accession	O9NZ45
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	12kDa KDa

CISD1 Antibody (clone AT1A8) - Additional Information**Gene ID** 55847**Other Names**

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

Target/Specificity

Human CISD1

Reconstitution & Storage

Can be stored at 4°C. For long term storage, aliquot and store at -20°C. Avoid repeated freezing and thawing cycles.

Precautions

CISD1 Antibody (clone AT1A8) is for research use only and not for use in diagnostic or therapeutic procedures.

CISD1 Antibody (clone AT1A8) - 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 L-glutamate (PubMed: [36194135](http://www.uniprot.org/citations/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.

Volume

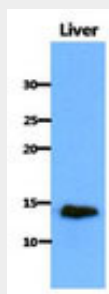
50 µl

CISD1 Antibody (clone AT1A8) - Protocols

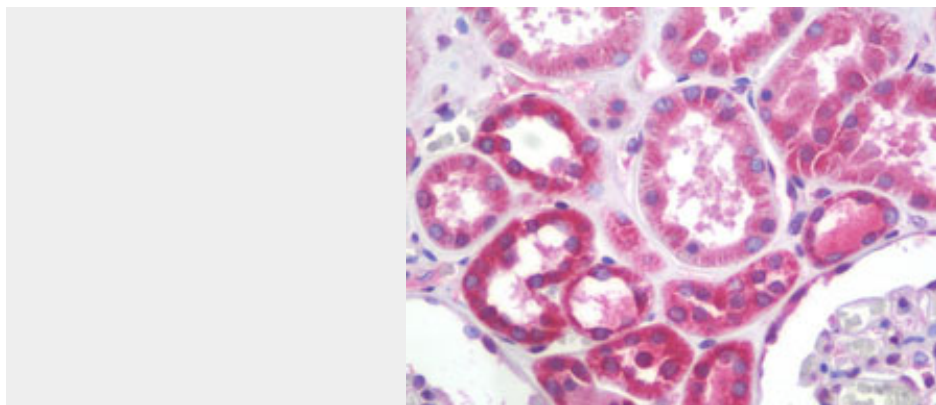
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CISD1 Antibody (clone AT1A8) - Images



Western Blot: The extract of Mouse liver (40 ug) were resolved by SDS-PAGE, transferred to PVDF...



Anti-CISD1 antibody IHC staining of human kidney.

CISD1 Antibody (clone AT1A8) - Background

Plays a key role in regulating maximal capacity for electron transport and oxidative phosphorylation (By similarity). May be involved in Fe-S cluster shuttling and/or in redox reactions.

CISD1 Antibody (clone AT1A8) - References

Taminelli G.L.,et al.Biochem. Biophys. Res. Commun. 365:856-862(2008).
Zhao M.,et al.Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Wiley S.E.,et al.J. Biol. Chem. 282:23745-23749(2007).