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CISD1 Antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI15252

Product Information

Application	WB
Primary Accession	Q9NZ45
Other Accession	NM_018464, NP_060934
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Goat, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Goat, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	12199

Additional Information

Gene ID	55847
Alias Symbol	C10orf70, MDS029, MGC14684, ZCD1, mitoNEET
Other Names	CDGSH iron-sulfur domain-containing protein 1, MitoNEET, CISD1, C10orf70, ZCD1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-CISD1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	CISD1 Antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

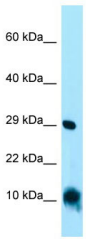
Name	CISD1
Synonyms	C10orf70, ZCD1
Function	L-cysteine transaminase that catalyzes the reversible transfer of the amino group from L-cysteine to the alpha-keto acid 2- oxoglutarate to respectively form 2-oxo-3-sulfanylpropanoate and L- glutamate (PubMed:36194135). The catalytic cycle occurs in the presence 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.

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).

Images



WB Suggested Anti-CISD1 Antibody Titration: 1.0 µg/ml
Positive Control: HepG2 Whole Cell

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.