10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CISD2 Antibody

Catalog # ASC11643

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q8N5K1
Other Accession	NP_001008389, 56605994
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	15278
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CISD2 antibody was raised against a 15 amino acid peptide near the center of human CISD2.

Additional Information

Gene ID	493856
Other Names	CDGSH iron-sulfur domain-containing protein 2, Endoplasmic reticulum intermembrane small protein, MitoNEET-related 1 protein, Miner1, Nutrient-deprivation autophagy factor-1, NAF-1, CISD2, CDGSH2, ERIS, ZCD2
Target/Specificity	CISD2;
Reconstitution & Storage	CISD2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	CISD2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CISD2
Synonyms	CDGSH2, ERIS, ZCD2
Function	Regulator of autophagy that contributes to antagonize BECN1- mediated cellular autophagy at the endoplasmic reticulum. Participates in the interaction of BCL2 with BECN1 and is required for BCL2-mediated depression of endoplasmic reticulum Ca(2+) stores during autophagy. Contributes to BIK-initiated autophagy, while it is not involved in BIK-dependent activation of caspases. Involved in life span control, probably via its function as regulator of autophagy.
Cellular Location	Endoplasmic reticulum membrane; Single-pass membrane protein.

	Mitochondrion outer membrane; Single-pass membrane protein. Note=According to PubMed:20010695, it mainly localizes to the endoplasmic reticulum. However, experiments in mouse showed that it mainly localizes to the mitochondrion outer membrane
Tissue Location	Testis, small intestine, kidney, lung, brain, heart, pancreas and platelets.

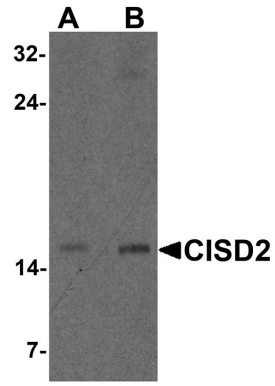
Background

CISD2 Antibody: Defects in the CISD2 (CDGSH iron sulfur domain 2) gene are a cause of the neurodegenerative disorder Wolfram syndrome 2. CISD2 is a zinc finger protein that localizes to the endoplasmic reticulum and mitochondria and binds an iron/sulfur cluster. CISD2 interacts with Bcl-2 and can be displaced by the BH3-only protein BIK and contributes to the regulation of BIK-initiated autophagy. CISD2 deficiency in mice causes mitochondrial breakdown accompanied by autophagic cell death as well as the development of premature aging phenotype.

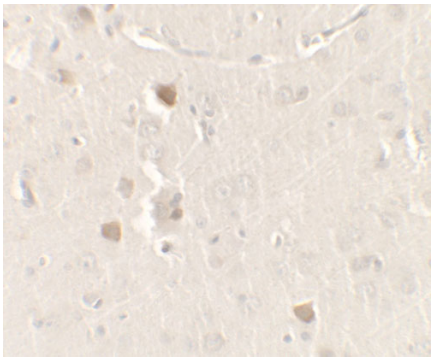
References

Amr S, Heisey C, Zhang M, et al. A homozygous mutation in a novel zinc-finger protein, ERIS, is responsible for Wolfram syndrome 2. Am. J. Hum. Genet. 2007; 81:673-83.
Chang NC, Nguyen M, Germain M, et al. Antagonism of Beclin 1-dependent autophagy by BCL-2 at the endoplasmic reticulum requires NAF-1. EMBO J. 2010; 29:606-18.
Chen YF, Kao CH, Chen YT, et al. Cisd2 deficiency drives premature aging and causes mitochondria-mediated defects in mice.

Images

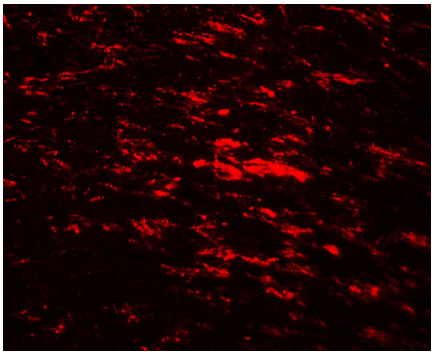


Western blot analysis of CISD2 in rat brain tissue lysate with CISD2 antibody at (A) 1 and (B) 2 µg/m



Immunohistochemistry of CISD2 in rat brain tissue with CISD2 antibody at 2.5 µg/ml.

Immunofluorescence of CISD2 in rat brain tissue with CISD2 antibody at 20 µg/ml.



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