

CDO1 Antibody

Catalog # ASC11907

Product Information

Application	WB, E
Primary Accession	Q16878
Other Accession	NP_001792 , 56786147
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	22972
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CDO1 antibody can be used for detection of CDO1 by Western blot at 1 - 2 μ g/ml.

Additional Information

Gene ID	1036
Other Names	Cysteine dioxygenase type 1, 1.13.11.20, Cysteine dioxygenase type I, CDO, CDO-I, CDO1
Target/Specificity	CDO1; CDO1 antibody is human, mouse and rat reactive.
Reconstitution & Storage	CDO1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	CDO1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDO1 {ECO:0000303 PubMed:40963025, ECO:0000312 HGNC:HGNC:1795}
Function	Rate-limiting enzyme of the cysteine catabolic process to taurine, which catalyzes the oxidation of cysteine to cysteine sulfinic acid with addition of molecular dioxygen.
Tissue Location	Highly expressed in liver and placenta. Low expression in heart, brain and pancreas. Also detected in hepatoblastoma Hep-G2 cells.

Background

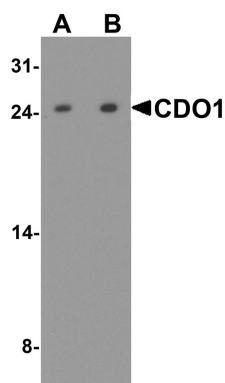
CDO1 (cysteine dioxygenase, type I) belongs to the cysteine dioxygenase family and is involved in

organosulfur biosynthesis (1). CDO1 functions as a dioxygenase that uses iron and zinc as cofactors to catalyze the conversion of L-cysteine and oxygen to 3-sulfinioalanine (1,2). CDO1 exists as a monomer and is expressed at high levels in liver and placenta and at lower levels in brain, pancreas and heart (1). CDO1 is involved in pyruvate-, sulfate- and taurine-related metabolic pathways and is a crucial regulator of cysteine concentrations within the cell (3,4).

References

- McCann KP, Akbari MT, Williams AC, et al. Human cysteine dioxygenase type I: primary structure derived from base sequencing of cDNA. *Biochim. Biophys. Acta* 1994; 1209:107-10.
- Ye S, Wu X, Wei L, et al. An insight into the mechanism of human cysteine dioxygenase. Key roles of the thioether-bonded tyrosine-cysteine cofactor. *J. Biol. Chem.* 2007; 282:3391-402.
- Booken N, Gratchev A, Utikal J, et al. Sezary syndrome is a unique cutaneous T-cell lymphoma as identified by an expanded gene signature including diagnostic marker molecules CDO1 and DNMT3. *Leukemia* 2008; 22:393-9.
- Wrangle J, Machida EO, Danilova L, et al. Functional identification of cancer-specific methylation of CDO1, HOXA9, and TAC1 for the diagnosis of lung cancer. *Clin. Cancer Res.* 2014; 20:1856-64.

Images



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