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

CDO1 Rabbit pAb

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Catalog # AP58317

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q16878
Predicted	Rat, Human, Mouse, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	22972
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CDO1
Epitope Specificity	101-200/200
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	CDO1 (cysteine dioxygenase, type I) is a 200 amino acid protein that belongs to the cysteine dioxygenase family and is involved in organosulfur biosynthesis. Existing as a monomer and expressed at high levels in liver and placenta and at lower levels in brain, pancreas and heart, CDO1 functions as a dioxygenase that uses iron and zinc as cofactors to catalyze the conversion of L-cysteine and oxygen to 3-sulfinoalanine. Via its catalytic activity, CDO1 is involved in pyruvate-, sulfate- and taurine-related metabolic pathways and is a crucial regulator of cysteine concentrations within the cell. Human CDO1 shares 94% amino acid identity with its rat counterpart, suggesting a conserved role between species. The gene encoding CDO1 maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome. PathwayOrganosulfur biosynthesis; taurine biosynthesis; hypotaurine from L-cysteine: step 1/2.

Additional Information

Gene ID	1036
Other Names	Cysteine dioxygenase type 1, 1.13.11.20, Cysteine dioxygenase type I, CDO, CDO-I, CDO1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000

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.

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.

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