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DDO Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP4795c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q99489
Reactivity	Human, Mouse
Predicted	Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23455
Calculated MW	37535
Antigen Region	102-130

Additional Information

Gene ID	8528
Other Names	D-aspartate oxidase, DASOX, DDO, DDO
Target/Specificity	This DDO antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 102-130 amino acids from the Central region of human DDO.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DDO Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DDO
Function	Selectively catalyzes the oxidative deamination of acidic amino acids (PubMed:1991137, PubMed:20603179, PubMed:23391306, PubMed:25747990, PubMed:28393897, PubMed:28560262, PubMed:28629864, PubMed:29292239, PubMed:31914658,

	PubMed:32553892, PubMed:9163533). Suppresses the level of D-aspartate in the brain, an amino acid that can act as an agonist for glutamate receptors (PubMed:28560262). Protects the organism from the toxicity of D-amino acids (By similarity). May also function in the intestine (By similarity).
Cellular Location	Peroxisome matrix. Cytoplasm, cytosol. Note=Active in the peroxisomal matrix [Isoform 3]: Peroxisome matrix
Tissue Location	Expressed in epithelial cells of the proximal nephron tubules in the renal cortex (at protein level) (PubMed:12209855, PubMed:1991137). In the brain, expressed in the frontal, temporal, and occipital lobes of the cortex, hippocampus, striatum, diencephalon, brainstem, cerebellum, spinal cord, plexus choroiderus and ependyma (at protein level) (PubMed:12209855, PubMed:28560262). Expression is increased in the prefrontal cortex of schizophrenic patients (PubMed:25689573). Levels are normal in the superior frontal gyrus of patients with Alzheimer's disease (PubMed:30822420).

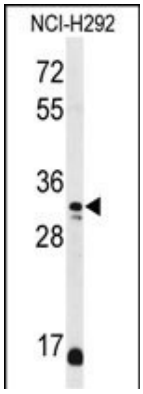
Background

DDO is a peroxisomal flavoprotein that catalyzes the oxidative deamination of D-aspartate and N-methyl D-aspartate. Flavin adenine dinucleotide or 6-hydroxyflavin adenine dinucleotide can serve as the cofactor in this reaction.

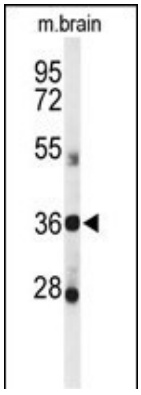
References

Jamra, R.A., et al. Psychiatr. Genet. 19 (1), 56 (2009)
Mungall, A.J., et al. Nature 425(6960):805-811(2003)
Zaar, K., et al. J. Comp. Neurol. 450(3):272-282(2002)

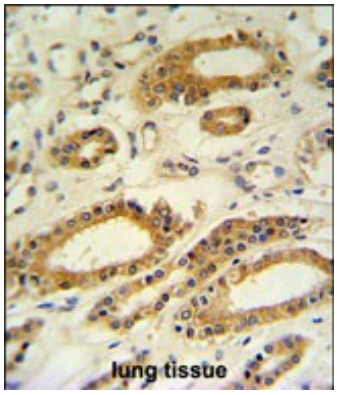
Images



Western blot analysis of DDO Antibody (Center) (Cat. #AP4795c) in NCI-H292 cell line lysates (35ug/lane). DDO (arrow) was detected using the purified Pab.



Western blot analysis of DDO Antibody (Center) (Cat. #AP4795c) in mouse brain tissue lysates (35ug/lane). DDO (arrow) was detected using the purified Pab.



DDO Antibody (Center) (Cat. #AP4795c) IHC analysis in formalin fixed and paraffin embedded lung tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the DDO Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

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