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DDC Antibody

Catalog # ASC11687

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P20711
Other Accession	NP_000781, 4503281
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	53926
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	DDC antibody can be used for detection of DDC by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	1644
Other Names	Aromatic-L-amino-acid decarboxylase, AADC, 4.1.1.28, DOPA decarboxylase, DDC, DDC, AADC
Target/Specificity	DDC; DDC antibody is human, mouse and rat reactive.
Reconstitution & Storage	DDC antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	DDC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DDC {ECO:0000303|PubMed:15532536, ECO:0000312|HGNC:HGNC:2719}
Function	Catalyzes the decarboxylation of L-3,4-dihydroxyphenylalanine (DOPA) to dopamine and L-5-hydroxytryptophan to serotonin.
Tissue Location	[Isoform 2]: High expression in kidney.

Background

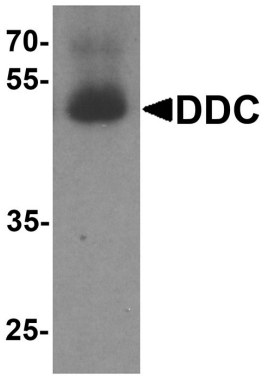
DOPA decarboxylase (DDC) belongs to the group II decarboxylase family of proteins (1). It is an important protein in the catecholamine biosynthesis pathway. DDC catalyzes the second reaction in the biosynthesis of catecholamines, trace amines and serotonin (1,2). It can form a homodimer and is expressed in the central

nervous system (2). DDC can be used as markers for dopaminergic, noradrenergic and serotonergic neurons in a variety of applications including depression, schizophrenia, Parkinson's disease, neuroendocrine tumors and drug abuse (3,4). Defects in DDC gene may cause the autosomal recessive disorder AADC deficiency (4).

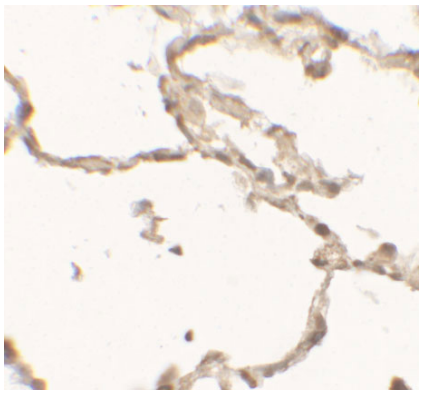
References

Berry MD, Juorio AV, Li XM, et al. Aromatic L-amino acid decarboxylase: a neglected and misunderstood enzyme. Neurochem. Res. 1996; 21:1075-87.
Sumi-Ichinose C, Ichinose H, Takahashi E, et al. Molecular cloning of genomic DNA and chromosomal assignment of the gene for human aromatic L-amino acid decarboxylase, the enzyme for catecholamine and Serotonin biosynthesis. Biochemistry 1992; 31:2229-38.
Haycock JW, Becker L, Ang L, et al. Marked disparity between age-related changes in dopamine and other presynaptic dopaminergic markers in human striatum. J. Neurochem. 2003; 87:574-85.
Chang YT, Sharma R, Marsh JL, et al. Levodopa-responsive aromatic L-amino acid decarboxylase deficiency. Ann. Neurol. 2004; 55:435-8.

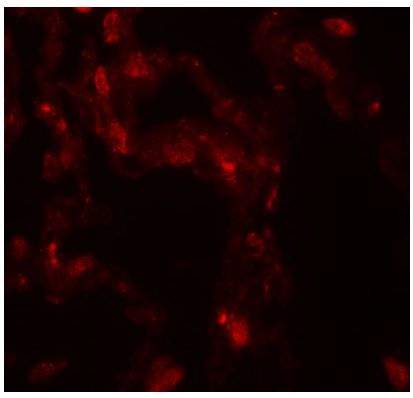
Images



Western blot analysis of DDC in human lung tissue lysate with DDC antibody at 1 µg/ml.



Immunohistochemistry of DDC in human lung tissue with DDC antibody at 2.5 µg/mL.



Immunofluorescence of DDC in human lung tissue with DDC antibody at 20 µg/mL.