

**DDC Antibody**  
**Catalog # ASC11687****Specification**

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**DDC Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">P20711</a>
Other Accession	<a href="#">NP_000781</a> , <a href="#">4503281</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 53 kDa
Application Notes	Observed: 50 kDa KDa DDC antibody can be used for detection of DDC by Western blot at 1 - 2 µg/ml.

**DDC Antibody - Additional Information**

Gene ID **1644**  
**Target/Specificity**  
DDC; DDC antibody is human, mouse and rat reactive.

**Reconstitution & Storage**

DDC antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

DDC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**DDC Antibody - 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.

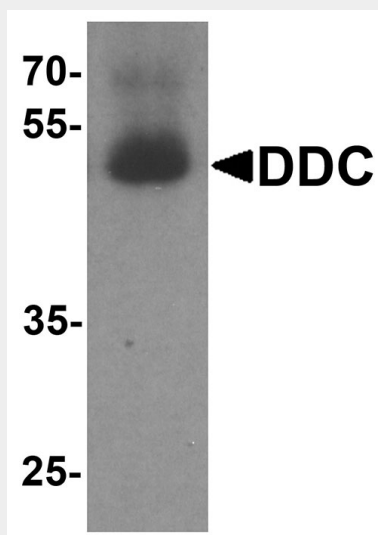
**DDC Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

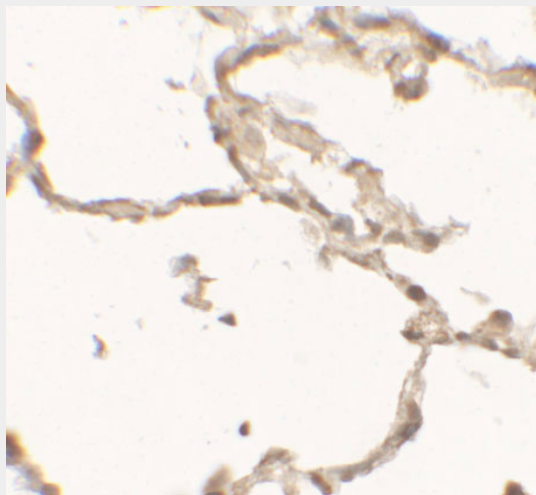
- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

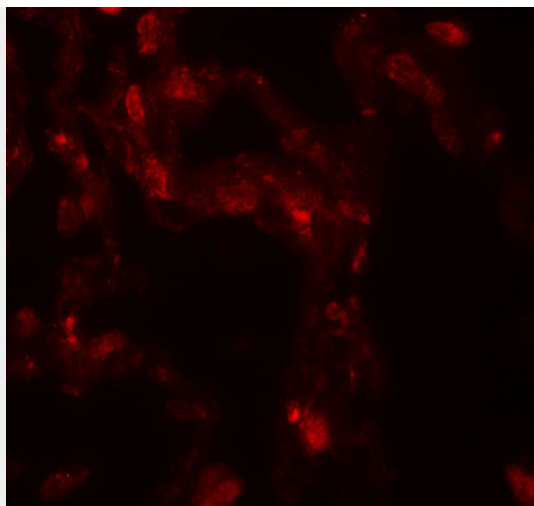
#### DDC Antibody - Images



Western blot analysis of DDC in human lung tissue lysate with DDC antibody at 1  $\mu$ g/ml.



Immunohistochemistry of DDC in human lung tissue with DDC antibody at 2.5  $\mu$ g/mL.



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

### **DDC Antibody - 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).

### **DDC Antibody - 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.