

For Research Use Only

DOPA decarboxylase/DDC Polyclonal antibody

Catalog Number: 10166-1-AP

10 Publications



Basic Information

Catalog Number:

10166-1-AP

Size:

150ul, Concentration: 450 ug/ml by Nanodrop;

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG0219

GenBank Accession Number:

BC008366

GeneID (NCBI):

1644

UNIPROT ID:

P20711

Full Name:

dopa decarboxylase (aromatic L-amino acid decarboxylase)

Calculated MW:

54 kDa

Observed MW:

48-50 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:500-1:3000

IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC 1:500-1:2000

IF/ICC 1:200-1:800

Applications

Tested Applications:

WB, IHC, IF/ICC, IP, ELISA

Cited Applications:

WB, IHC, IF

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : SH-SY5Y cells, mouse kidney tissue, mouse brain tissue, rat kidney tissue, PC-12 cells

IP : mouse brain tissue,

IHC : mouse kidney tissue, human liver cancer tissue, rat kidney tissue, rat small intestine tissue

IF/ICC : SH-SY5Y cells,

Background Information

DOPA decarboxylase (DDC), also known as aromatic L-amino acid decarboxylase, belongs to the pyridoxal-dependent aminotransferase superfamily. DDC is an enzyme that converts levodopa into dopamine¹⁴, the latter being severely depleted in LBD due to the loss of dopaminergic neurons in the substantia nigra (PMID: 3374198, PMID: 28100251). DDC catalyzes the decarboxylation of L-3,4-dihydroxyphenylalanine (DOPA) to dopamine, L-5-hydroxytryptophan to serotonin and L-tryptophan to tryptamine. DDC is the cause of aromatic L-amino-acid decarboxylase deficiency (AADCD). Researches showed that Ddc is only one of the enzymes in the biosynthetic pathways for bioamines and catecholamines.

Notable Publications

| Author | Pubmed ID | Journal | Application |
|----------------|-----------|--------------|-------------|
| Mette Q Ludwig | 33767443 | Nat Metab | IHC |
| Ming Ming | 19558709 | J Transl Med | WB |
| Hao Qian | 32581380 | Nature | IF |

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

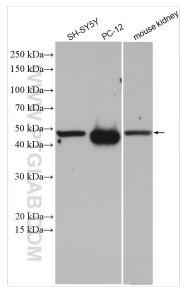
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

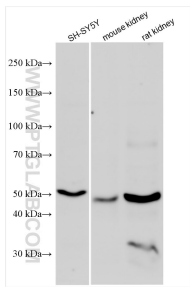
E: proteintech@ptglab.com
W: ptglab.com

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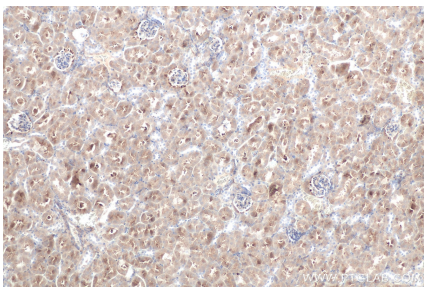
Selected Validation Data



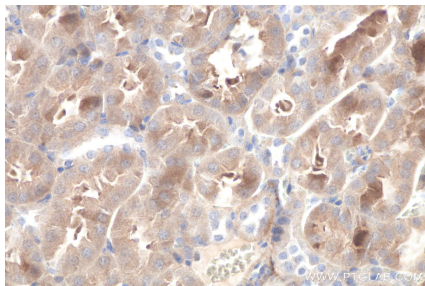
Various lysates were subjected to SDS PAGE followed by western blot with 10166-1-AP (DOPA decarboxylase/DDC antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.



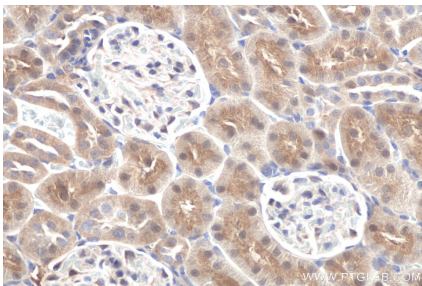
Various lysates were subjected to SDS PAGE followed by western blot with 10166-1-AP (DOPA decarboxylase/DDC antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



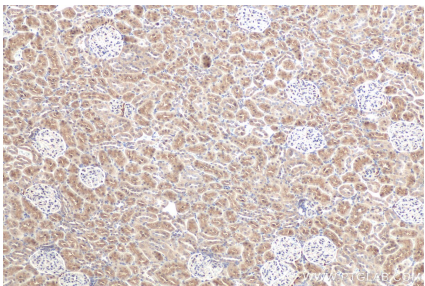
Immunohistochemical analysis of paraffin-embedded mouse kidney tissue slide using 10166-1-AP (DOPA decarboxylase antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



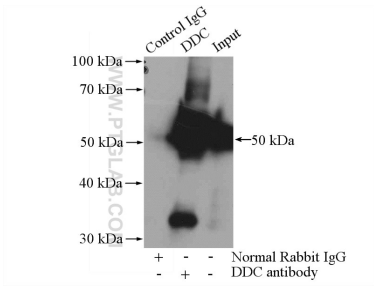
Immunohistochemical analysis of paraffin-embedded mouse kidney tissue slide using 10166-1-AP (DOPA decarboxylase antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



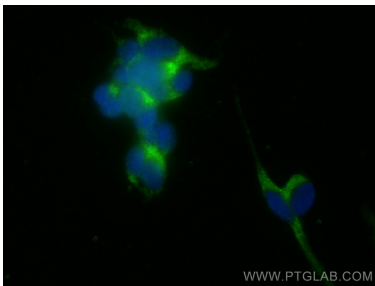
Immunohistochemical analysis of paraffin-embedded rat kidney tissue slide using 10166-1-AP (DOPA decarboxylase/DDC antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded rat kidney tissue slide using 10166-1-AP (DOPA decarboxylase/DDC antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP result of anti-DOPA decarboxylase/DDC (IP:10166-1-AP, 4ug; Detection:10166-1-AP 1:800) with mouse brain tissue lysate 4000ug.



Immunofluorescent analysis of (-20°C Ethanol) fixed SH-SY5Y cells using DOPA decarboxylase antibody (10166-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).