

DOPA Decarboxylase Rabbit pAb

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Catalog # AP52155

Product Information

Application	WB
Primary Accession	P20711
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	53926
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DDC
Epitope Specificity	201-300/480
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
DISEASE	Defects in DDC are the cause of aromatic L-amino-acid decarboxylase deficiency (AADCD) [MIM:608643]. AADCD deficiency is an inborn error in neurotransmitter metabolism that leads to combined serotonin and catecholamine deficiency. It causes developmental and psychomotor delay, poor feeding, lethargy, ptosis, intermittent hypothermia, gastrointestinal disturbances. The onset is early in infancy and inheritance is autosomal recessive.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	bs-0180P is one synthetic peptide derived from human DDC. DOPA decarboxylase is an enzyme implicated in 2 metabolic pathways, synthesizing 2 important neurotransmitters: dopamine and serotonin which both play key roles in many clinical disorders, including Parkinson's disease. Following the hydroxylation of tyrosine to form L dihydroxyphenylalanine (LDOPA), catalyzed by tyrosine hydroxylase, DDC decarboxylates LDOPA to form dopamine. This neurotransmitter is found in different areas of the brain and is particularly abundant in basal ganglia. Dopamine is also produced by DDC in the sympathetic nervous system and is the precursor of the catecholaminergic hormones, noradrenaline and adrenaline in the adrenal medulla. In the nervous system, tryptophan hydroxylase produces 5 OH tryptophan, which is decarboxylated by DDC, giving rise to serotonin. DDC is a homodimeric, pyridoxal phosphate dependent enzyme.

Additional Information

Gene ID	1644
Other Names	Aromatic-L-amino-acid decarboxylase, AADC, 4.1.1.28, DOPA decarboxylase, DDC, DDC {ECO:0000303 PubMed:15532536,

ECO:0000312 | HGNC:HGNC:2719}

Dilution

WB=1:500-2000

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

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.

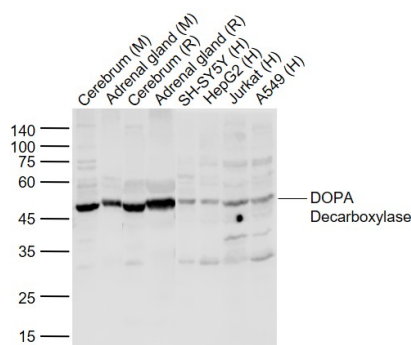
Background

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References

Ichinose H.,et al.Biochem. Biophys. Res. Commun. 164:1024-1030(1989).
Scherer L.J.,et al.Genomics 13:469-471(1992).
Sumi-Ichinose C.,et al.Biochemistry 31:2229-2238(1992).
Vassilacopoulou D.S.,et al.Neurochem. Res. 29:1817-1823(2004).
Hillier L.W.,et al.Nature 424:157-164(2003).

Images



Sample:

Lane 1: Cerebrum (Mouse) Tissue Lysate at 40 ug

Lane 2: adrenal gland (Mouse) Tissue Lysate at 40 ug

Lane 3: Cerebrum (Rat) Tissue Lysate at 40 ug

Lane 4: adrenal gland (Rat) Tissue Lysate at 40 ug

Lane 5: SH-SY5Y (Human) Cell Lysate at 30 ug

Lane 6: HepG2 (Human) Cell Lysate at 30 ug

Lane 7: Jurkat (Human) Cell Lysate at 30 ug

Lane 8: A549 (Human) Cell Lysate at 30 ug

Primary: Anti-DOPA Decarboxylase (AP52155) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 53 kD

Observed band size: 50 kD

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