



**PhosphoSolutions®**  
Antibodies that work™

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## Anti-DOPA Decarboxylase

**Catalog Number:** 418-DDCH

**Size:** 100 µl

**Product Description:** Affinity purified rabbit polyclonal antibody

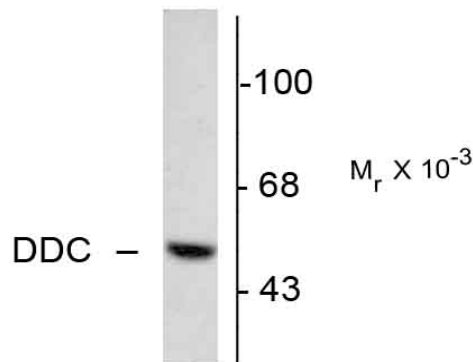
**Applications:** WB: 1:1000

**Antigen:** Peptide from N-terminus region of human DOPA decarboxylase (DDC), conjugated to keyhole limpet hemocyanin (KLH).

**Species reactivity:** The antibody has been directly tested for reactivity in Western blots in bovine, canine, guinea pig, human, rabbit, rat and sheep tissues.

**Biological Significance:** DOPA decarboxylase (aromatic L-amino acid decarboxylase, AADC; DDC) catalyzes the second reaction in the biosynthesis of catecholamines and serotonin (Waymire and Haycock, 2002; Berry et al., 1996; Haycock et al., 2003). It is also involved in the biosynthesis of trace amines. DDC antibodies can therefore be used as markers for dopaminergic, noradrenergic and serotonergic neurons in a variety of applications including depression, schizophrenia, Parkinson's disease and drug abuse (Kish et al., 2001; Zhu et al., 2000; Zhu et al., 1999).

### Anti-DOPA Decarboxylase



**Western blot** of 5 µg of bovine adrenal medulla lysate showing specific immunolabeling of the ~55k DOPA decarboxylase protein.

**Purification Method:** Prepared from rabbit serum by affinity purification using an AminoLink® Plus column matrix to which purified, recombinant bovine DDC was coupled.

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**WB** = Western Blot    **IF** = Immunofluorescence    **IHC** = Immunohistochemistry    **IP** = Immunoprecipitation

**PPackaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

**Storage and Stability.** For long term storage -20°C is recommended. Stable at -20°C for at least 1 year.

**Shipment:** Domestic - Blue Ice; International - Blue Ice or Dry Ice.

**Antibody Specificity:** Specific for the ~55k DDC protein.

**Quality Control Tests:** Western blots performed on each lot.

**References:**

- Berry MD, Juorio AV, Li XM, Boulton AA (1996) Aromatic L-amino acid decarboxylase: a neglected and misunderstood enzyme. *Neurochem Res* 21:1075-1087.
- Haycock JW, Becker L, Ang L, Furukawa Y, Hornykiewicz O, Kish SJ (2003) Marked disparity between age-related changes in dopamine and other presynaptic dopaminergic markers in human striatum. *J Neurochem* 87:574-585.
- Kish SJ, Kalasinsky KS, Derkach P, Schmunk GA, Guttman M, Ang L, Adams V, Furukawa Y, Haycock JW (2001) Striatal dopaminergic and serotonergic markers in human heroin users. *Neuropsychopharmacology* 24:561-567.
- Waymire JC, Haycock JW (2002) Lack of regulation of aromatic L-amino acid decarboxylase in intact bovine chromaffin cells. *J Neurochem* 81:589-593.
- Zhu MY, Klimek V, Haycock JW, Ordway GA (2000) Quantitation of tyrosine hydroxylase protein in the locus coeruleus from postmortem human brain. *J Neurosci Meth* 99:37-44.
- Zhu MY, Klimek V, Dilley GE, Haycock JW, Stockmeier C, Overholser JC, Meltzer HY, Ordway GA (1999) Elevated levels of tyrosine hydroxylase in the locus coeruleus in major depression. *Biol Psychiatry* 46:1275-1286.

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