



PhosphoSolutions[®]
Antibodies that work™

Colorado Biosciences Park
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Anti-DOPA Decarboxylase

Catalog Number: 417-DDC

Size: 100 µl

Product Description: Affinity purified rabbit polyclonal antibody

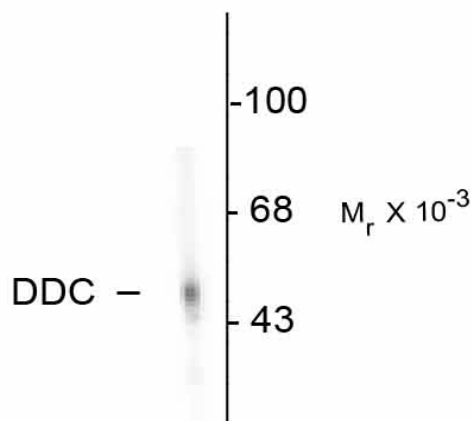
Applications: WB: 1:1000

Antigen: SDS denatured, recombinant bovine aromatic DOPA decarboxylase (DDC) expressed in *E. coli* and purified from inclusion bodies.

Species reactivity: The antibody has been directly tested for reactivity in Western blots in rat 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 rat adrenal medulla showing specific immunolabeling of the ~55k DDC protein.

Page 1 of 2

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

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

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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