Revision 1

#8786 Store at -20C

DDC Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	M R	Endogenous	48	Rabbit	#P20711	1644

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

DDC Antibody recognizes endogenous levels of total DDC protein.

Species predicted to react based on 100% sequence homology:

Human

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val33 of human DDC protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

L-DOPA decarboxylase (DDC) is a pyridoxal 5-phosphate (PLP)-dependent enzyme that catalyzes the decarboxylation of L-DOPA to dopamine (1) and L-5HTP to serotonin (2). By catalyzing the reaction to produce dopamine, DDC is involved in many important metabolic processes and plays a central role in the complex neuroendocrine-immune regulatory network (1). DDC is expressed in the central nervous system (3), but has also been detected in some peripheral organs such as the liver and adrenal gland, as well as leukocytes of rat and human (1). DDC is thought to be the sole enzyme responsible for the synthesis of the trace amines 2-phenylethylamine, p-tyramine, and tryptamine, which are considered to act as neuromodulators (2,4). DDC is also regarded as a general biomarker for neuroendocrine tumors (3).

Background References

1. Zhou, Z. et al. (2011) *PLoS One* 6, e18596.
2. Børglum, A.D. et al. (1999) *Mol Psychiatry* 4, 545-51.
3. Kontos, C.K. et al. (2010) *Br J Cancer* 102, 1384-90.
4. Ma, J.Z. et al. (2005) *Hum Mol Genet* 14, 1691-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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