#8586 Store at -20°C

Dopamine β-Hydroxylase (DBH) Antibody

Cell Signaling TECHNOLOGY®

☑ 100 µl
(10 western blots)

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New 09/11

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #1621
Swiss-Prot Acc. #P09172

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H	75-80 kDa	Rabbit **

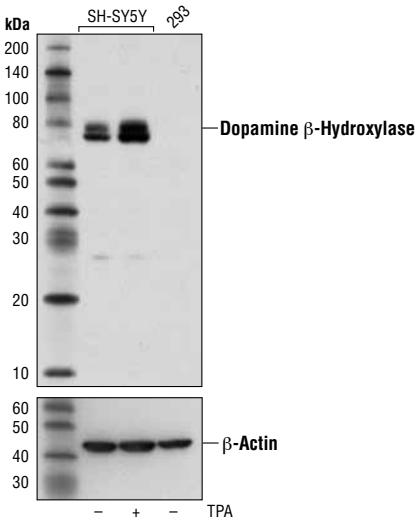
Background: Dopamine β-Hydroxylase (DBH) is an enzyme of the copper type II ascorbate-dependent monooxygenase family. This enzyme forms homotetramers composed of two noncovalently bound disulfide-linked dimers and is found as both membrane-associated and soluble forms (1,2,3). The soluble form is present in the lumen of secretory ganules (4) and is released from cells by exocytosis (5). DBH converts dopamine to noradrenaline (6). Deficiency in this enzyme causes a rare disease characterized by a complete absence of noradrenaline and adrenaline in plasma together with increased plasma dopamine levels (7). Orthostatic hypotension, the main symptom of DBH deficiency, can be alleviated by administration of dihydroxyphenylserine, a synthetic precursor of noradrenaline (8).

Specificity/Sensitivity: Dopamine β-Hydroxylase (DBH) Antibody recognizes endogenous levels of total DBH protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala211 of human dopamine β-hydroxylase protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

(1) Smith, W.J. and Kirshner, N. (1967) *Mol Pharmacol* 3, 52-62.
(2) Lagercrantz, H. (1976) *Neuroscience* 1, 81-92.
(3) Winkler, H. (1976) *Neuroscience* 1, 65-80.
(4) Laduron, P.M. (1975) *FEBS Lett* 52, 132-4.
(5) Weinshilboum, R.M. et al. (1971) *Science* 174, 1349-51.
(6) Kaufman, S. and Friedman, S. (1965) *Pharmacol Rev* 17, 71-100.
(7) Robertson, D. et al. (1986) *N Engl J Med* 314, 1494-7.
(8) Biaggioni, I. and Robertson, D. (1987) *Lancet* 2, 1170-2.



Western blot analysis of extracts from SH-SY5Y cells, untreated (-) or treated with TPA (200 nM, 24 hr) #4174 (+), and 293 cells, using Dopamine β-Hydroxylase (DBH) Antibody.

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.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **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 **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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