

**Affinity Purified Sheep  
Anti-Dopamine  $\beta$ -Hydroxylase, C-Terminus  
Certificate of Analysis**

**ORDERING INFORMATION**

**Catalog Number:** PPS066

**Lot Numbers:** 1199952

**Size:** 100  $\mu$ L (sufficient for 10 mini-blot)

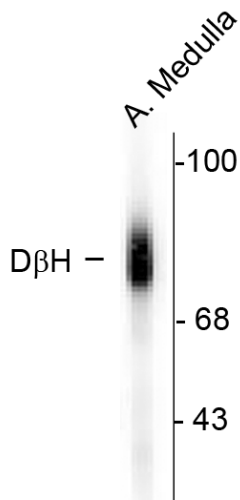
**Storage:**  $\leq -20^{\circ}$  C

**Specificity:** Human, monkey, bovine, and rabbit ~75 kDa Dopamine  $\beta$ -hydroxylase (D $\beta$ H)

**Immunogen:** Peptide from the C-terminus region of human Dopamine  $\beta$ -Hydroxylase (D $\beta$ H), conjugated to keyhole limpet hemocyanin (KLH)

**Ig Type:** sheep IgG

**Applications:** Western blot



Western blot of human adrenal medulla lysate showing specific immunolabeling of the ~75 kDa D $\beta$ H protein.

**Caution:** This product contains sodium azide, which may react with lead and copper plumbing to form explosive metallic azides. Flush with large volumes of water during disposal.

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**Description**

Dopamine  $\beta$ -hydroxylase (D $\beta$ H; also dopamine  $\beta$ -monooxygenase) is a 73 - 77 kDa member of the copper type II ascorbate-dependent monooxygenase family. It is both soluble (73 kDa) and membrane-bound (77 kDa) (anchored by an uncleaved signal sequence), and via hydroxylation, converts dopamine into norepinephrine. Human D $\beta$ H is a copper-containing disulfide-linked homodimer that is found in neurons and adrenal medullary cells. It is 603 amino acids (aa) in length and contains a 25 aa signal sequence followed by three domains. The first is an N-terminal 120 aa DOMON domain (dopamine  $\beta$ -monooxygenase N-terminal) that may either bind D $\beta$ H to the cell membrane, or participate in tetramerization. This is followed by two 150 aa Cu<sup>+</sup>-type II ascorbate-dependent monooxygenase domains (aa 182 - 330 and 352 - 512). D $\beta$ H may be most active as a dimeric-dimer/tetramer, whose association status is dependent on local Cl<sup>-</sup> concentrations.

**Preparation**

Prepared from sheep serum by affinity purification using a Sulfo-Link<sup>®</sup> column matrix to which the peptide immunogen was coupled.

**Formulation**

100  $\mu$ L in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/mL BSA, 50% glycerol, and 0.09% sodium azide.

**Storage**

For long-term storage,  $\leq -20^{\circ}$  C is recommended. Product is stable at  $\leq -20^{\circ}$  C for at least 1 year.

**Specificity**

Specific for the ~75 kDa D $\beta$ H protein in Western blots of human adrenal medulla. This antibody also recognizes D $\beta$ H in monkey, bovine, and rabbit tissues.

**Applications**

**Western blot** - 1:1000

**Optimal dilutions should be determined by each laboratory for each application.**

**References**

1. Kreek, M.J. *et al.* (2005) *Pharmacol. Rev.* **57**:1.
2. Stewart, L. and J.P. Klinman (1999) *FEBS Lett.* **454**:229.
3. Houhou, L. *et al.* (1995) *J. Biol. Chem.* **270**:12601.
4. Timmers, H. *et al.* (2004) *Ann. N.Y. Acad. Sci.* **1018**:520.
5. Lamouroux, A. *et al.* (1987) *EMBO J.* **6**:3931.

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Quality & Regulatory Affairs

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