

#2792 Store at -20°C

Tyrosine Hydroxylase 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

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	55-60	Rabbit	#P07101	7054

Product Usage Information	Application Western Blotting	Dilution 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	Tyrosine Hydroxylase Antibody detects endogenous levels of total tyrosine hydroxylase.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino-terminal sequence of human tyrosine hydroxylase. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Tyrosine hydroxylase (TH) catalyzes the rate-limiting step in the synthesis of the neurotransmitter dopamine and other catecholamines. TH functions as a tetramer, with each subunit composed of a regulatory and catalytic domain, and exists in several different isoforms (1,2). This enzyme is required for embryonic development since TH knockout mice die before or at birth (3). Levels of transcription, translation and post-translational modification regulate TH activity. The amino-terminal regulatory domain contains three serine residues: Ser9, Ser31, and Ser40. Phosphorylation at Ser40 by PKA positively regulates the catalytic activity of TH (4-6). Phosphorylation at Ser31 by CDK5 also increases the catalytic activity of TH through stabilization of TH protein levels (7-9).	
Background References	1. Kumer, S.C. and Vrana, K.E. (1996) <i>J Neurochem</i> 67, 443-62. 2. Bodeau-Péan, S. et al. (1999) <i>J Biol Chem</i> 274, 3469-75. 3. Kobayashi, K. et al. (1995) <i>J Biol Chem</i> 270, 27235-43. 4. Lew, J.Y. et al. (1999) <i>Mol Pharmacol</i> 55, 202-9. 5. Vié, A. et al. (1999) <i>J Biol Chem</i> 274, 16788-95. 6. Lindgren, N. et al. (2000) <i>J Neurochem</i> 74, 2470-7. 7. Moy, L.Y. and Tsai, L.H. (2004) <i>J Biol Chem</i> 279, 54487-93. 8. Lehmann, I.T. et al. (2006) <i>J Biol Chem</i> 281, 17644-51. 9. Saraf, A. et al. (2007) <i>J Biol Chem</i> 282, 573-80.	

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
Trademarks and Patents	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.
Limited Uses	Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.