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<b>Catalog Number:</b>	RA18026	<b>Host:</b>	Rabbit
<b>Product Type:</b>	Affinity Purified Rabbit Antibody	<b>Species Reactivity:</b>	Rat
<b>Immunogen Sequence:</b>	Synthetic phospho-peptide (KLH coupled) derived from the sequence surrounding Ser40 of human tyrosine hydroxylase.	<b>Format:</b>	Affinity purified liquid Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol.
<b>Applications</b>	Western blotting: 1:1000 Immunohistochemistry: 1:100 Immunoprecipitation: 1:100 Immunofluorescence: 1:100		

Dilutions listed as a recommendation. Optimal dilution should be determined by investigator.

<b>Storage:</b>	Antibody can be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. The antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. <i>Avoid repeated freeze-thaw cycles.</i>
<b>References:</b>	<a href="#">Hans-Ulrich Fried, U. Benjamin Kaupp and Frank Müller. Hyperpolarization-activated and cyclic nucleotide-gated channels are differentially expressed in juxtglomerular cells in the olfactory bulb of mice. Cell Tissue Res. 2010 March; 339(3): 463–479. Published online 2010 February 6. doi: 10.1007/s00441-009-0904-9.</a> <a href="#">Sujoy K. Dhara, Brian A. Gerwe, Anirban Majumder, Mahesh C. Dodla, Nolan L. Boyd, David W. Machacek, Kowser Hasneen, Steven L. Stice. Genetic Manipulation of Neural Progenitors Derived from Human Embryonic Stem Cells. Tissue Engineering Part A. -Not available-, ahead of print. doi:10.1089/ten.tea.2009.0155.</a> <a href="#">Blount, Andrew L. B.A.; Peled, Ziv M. M.D.; Dexter, Erica L. B.S.; Nagle, Raymond B. M.D., Ph.D.; Maloney, Christopher T. M.D.; Dellon, A Lee M.D., Ph.D. Sympathetic Nerves in the Tarsal Tunnel: Implications for Blood Flow in the Diabetic Foot. Plastic &amp; Reconstructive Surgery. 122(1):188-191, July 2008.</a>

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### Application Notes

#### Specificity

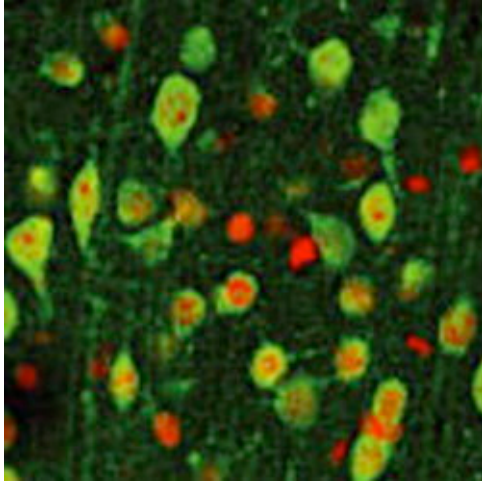
Phospho-Tyrosine Hydroxylase (Ser40) Antibody detects endogenous levels of tyrosine hydroxylase only when phosphorylated at serine 40.

#### Description/Data:

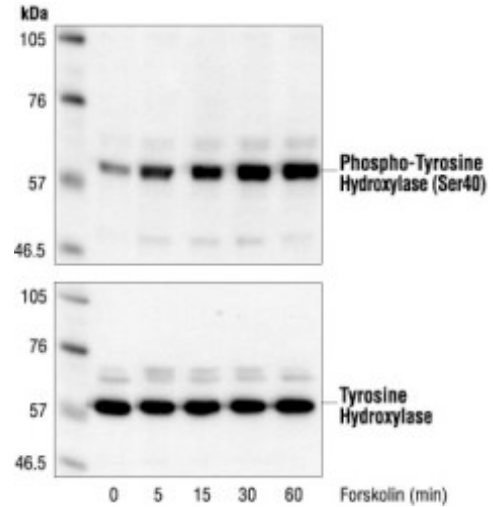
Tyrosine hydroxylase is involved in the conversion of phenylalanine to dopamine. As the rate-limiting enzyme in the synthesis of catecholamines, tyrosine hydroxylase has a key role in the physiology of adrenergic neurons. Tyrosine hydroxylase is regularly used as a marker for dopaminergic neurons, which is particularly relevant for research into Parkinson's disease.

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*IHC Image: Phospho-Tyrosine Hydroxylase (Ser40) staining of Rat Cortical Neurons (Green).*



*WB Image: Western blot analysis of extracts from PC12 cells, untreated or forskolin-treated (30  $\mu$ M), using Phospho-Tyrosine Hydroxylase (Ser40) Antibody (upper) or Tyrosine Hydroxylase Antibody.*

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