Datasheet: AHP912

BATCH NUMBER 158649

Description:	RABBIT ANTI TYROSINE HYDROXYLASE (pSer40)
Specificity:	TYROSINE HYDROXYLASE (pSer40)
Format:	Purified
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	0.1 ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			1/1000
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			1/1000
Immunofluorescence	▪			1/1000

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species

Rat

Species Cross Reactivity

Based on sequence similarity, is expected to react with:Mouse, Human, Pig
N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG - liquid

Antiserum Preparation

Antisera to phosphorylated tyrosine hydroxylase were raised by repeated immunisations of rabbits with highly purified antigen. Purified IgG prepared by affinity chromatography.

Buffer Solution	10mM HEPES pH7.5
Preservative Stabilisers	0.09% Sodium Azide 0.01% Bovine Serum Albumin 50% Glycerol
Immunogen	Synthetic phosphopeptide corresponding to an amino acid sequence within Tyrosine Hydroxylase which includes the phosphorylated residue Ser 40.
External Database Links	**UniProt:** P07101 Related reagents **Entrez Gene:** 7054 TH Related reagents
Synonyms	TYH
RRID	AB_567401
Specificity	**Rabbit anti Rat tyrosine hydroxylase (pSer40) antibody** recognizes tyrosine hydroxylase (TH), also known as tyrosine 3-monooxygenase, when phosphorylated at serine 40. Tyrosine hydroxylase (TH) catalyzes the rate-limiting step in the biosynthetic pathway of the catecholamines dopamine (DA), norepinephrine, and epinephrine. The enzyme exists as a tetramer, with each subunit composed of an N-terminal regulatory domain and a C-terminal catalytic domain. Phosphorylation of TH has been shown to occur at several serine residues. Phosphorylation at serine 40 results in an increase in hydroxylase activity, and phosphorylation at serine 19 is reported to promote phosphorylation of the serine 40 residue (Dunkley *et al.* 2004). Tyrosine hydroxylase is regularly used as a marker for dopaminergic neurons, which is particularly relevant for research into Parkinson's disease (Pearson *et al* 1979).
Western Blotting	AHP912 detects a band of approximately 60kDa in PC-12 cell lysates, following stimulation by Okadaic acid.
References	1. Hoard, J.L. *et al.* (2008) Cholinergic neurons of mouse intrinsic cardiac ganglia contain noradrenergic enzymes, norepinephrine transporters, and the neurotrophin receptors tropomyosin-related kinase A and p75. Neuroscience. 156 (1): 129-42. 2. Xiao, M.F. *et al.* (2009) Neural cell adhesion molecule modulates dopaminergic signaling and behavior by regulating dopamine D2 receptor internalization. J Neurosci. 29 (47): 14752-63. 3. Li, S. *et al.* (2013) The neural cell adhesion molecule (NCAM) associates with and signals through p21-activated kinase 1 (Pak1). J Neurosci. 33 (2): 790-803.

4. Kotarska, A. *et al.* (2020) Cell adhesion molecule close homolog of L1 binds to the dopamine receptor D2 and inhibits the internalization of its short isoform. FASEB J. 34 (4): 4832-51.

Further Reading	1. Haycock, J.W. (1990) Phosphorylation of tyrosine hydroxylase in situ at serine 8, 19, 31, and 40. J Biol Chem. 265 (20): 11682-91. 2. Bevilaqua, L.R. *et al.* (2001) Phosphorylation of Ser(19) alters the conformation of tyrosine hydroxylase to increase the rate of phosphorylation of Ser(40). J Biol Chem. 276 (44): 40411-6.
Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10088 available at: https://www.bio-rad-antibodies.com/SDS/AHP912 10088
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...)	FITC
Goat Anti Rabbit IgG (H/L) (STAR124...)	HRP
Sheep Anti Rabbit IgG (STAR35...)	RPE
Goat Anti Rabbit IgG (Fc) (STAR121...)	Biotin, FITC, HRP

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