

Datasheet for ABIN372738

anti-Tyrosine Hydroxylase antibody (pSer40)**2** Images**4** Publications[Go to Product page](#)

Overview

Quantity:	0.1 mL
Target:	Tyrosine Hydroxylase (TH)
Binding Specificity:	pSer40
Reactivity:	Rat, Mammalian
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Tyrosine Hydroxylase antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser40 of Rat Tyrosine Hydroxylase.
Isotype:	IgG
Specificity:	Specific for the ~60k Tyrosine Hydroxylase protein phosphorylated at Ser40. Some higher Molecular Weight bands may be detected by the antibody depending upon the brain region being studied, protein loads and the detection methods used. The antibody has three orders of magnitude selectivity over dephospho TH.
Cross-Reactivity (Details):	Species reactivity (tested): Many Mammalian and Non-mammalian.
Purification:	Affinity Chromatography via Sequential Chromatography on phospho- and dephosphopeptide affinity columns.

Target Details

Target:	Tyrosine Hydroxylase (TH)
Alternative Name:	Tyrosine 3-Monooxygenase (TH) (TH Products)
Background:	Tyrosine Hydroxylase (TH) is the rate-limiting enzyme in the synthesis of the catecholamines Dopamine and Norepinephrine. TH antibodies can therefore be used as markers for dopaminergic and noradrenergic neurons in a variety of applications including depression, schizophrenia, Parkinson's disease and drug abuse (Kish et al., 2001, Zhu et al., 2000, Zhu et al., 1999). TH antibodies can also be used to explore basic mechanisms of dopamine and norepinephrine signaling (Witkovsky et al., 2000, Salvatore et al., 2001, Dunkley et al., 2004). The activity of TH is also regulated by phosphorylation (Haycock et al., 1982, Haycock et al., 1992, Jedynek et al., 2002). Phospho-specific antibodies for the phosphorylation sites on TH can be used to great effect in studying this regulation and in identifying the cells in which TH phosphorylation occurs. Synonyms: TYH, Tyrosine 3-hydroxylase
Gene ID:	25085
NCBI Accession:	NP_036872
UniProt:	P04177
Pathways:	Dopaminergic Neurogenesis , Response to Water Deprivation , Sensory Perception of Sound , Carbohydrate Homeostasis , Feeding Behaviour

Application Details

Application Notes:	Western blotting: 1/1,000. Immunofluorescence 1/1000 (Frozen Sections). Immunohistochemistry on Frozen Sections: 1/1000. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA and 50 % Glycerol.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	-20 °C
Storage Comment:	Store the antibody undiluted (in aliquots) at -20 °C.

Publications

Product cited in: McCutcheon, Conrad, Carr, Ford, McGehee, Marinelli: "Dopamine neurons in the ventral tegmental area fire faster in adolescent rats than in adults." in: **Journal of neurophysiology**, Vol. 108, Issue 6, pp. 1620-30, (2012) ([PubMed](#)).

Meyer, Richer, Benkovic, Hayashi, Kansy, Hale, Moy, Kim, OCallaghan, Tsai, Greengard, Nairn, Cowan, Miller, Antich, Bibb: "Striatal dysregulation of Cdk5 alters locomotor responses to cocaine, motor learning, and dendritic morphology." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 105, Issue 47, pp. 18561-6, (2008) ([PubMed](#)).

Jedynak, Ali, Haycock, Hope: "Acute administration of cocaine regulates the phosphorylation of serine-19, -31 and -40 in tyrosine hydroxylase." in: **Journal of neurochemistry**, Vol. 82, Issue 2, pp. 382-8, (2002) ([PubMed](#)).

Salvatore, Waymire, Haycock: "Depolarization-stimulated catecholamine biosynthesis: involvement of protein kinases and tyrosine hydroxylase phosphorylation sites in situ." in: **Journal of neurochemistry**, Vol. 79, Issue 2, pp. 349-60, (2001) ([PubMed](#)).

Images

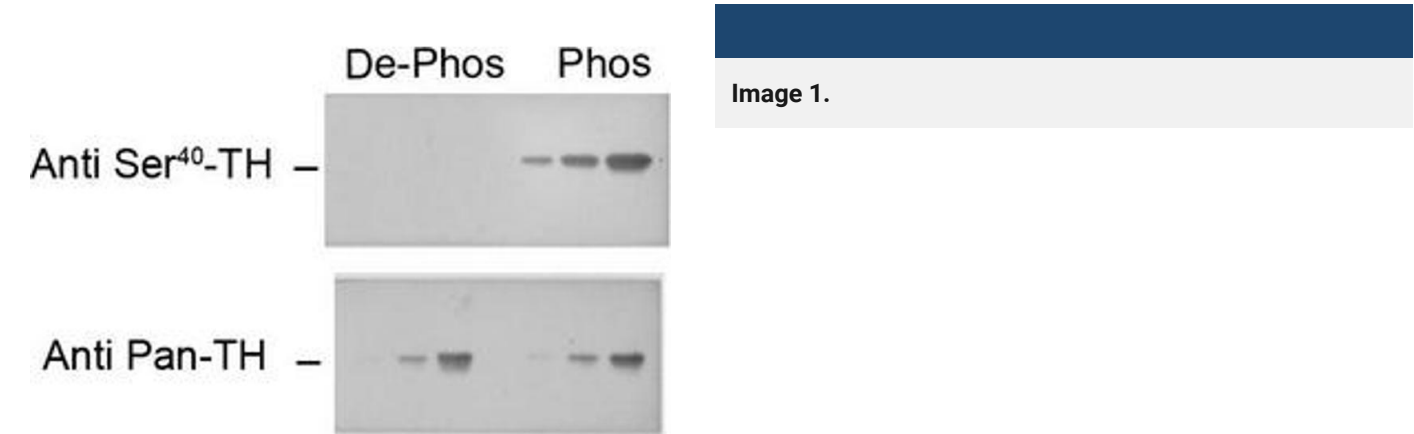


Image 2.

