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Phospho-Ser40 Tyrosine Hydroxylase Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AN1119

Specification

Phospho-Ser40 Tyrosine Hydroxylase Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P04177
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**60 KDa**

Phospho-Ser40 Tyrosine Hydroxylase Antibody - Additional Information

Gene ID	**25085**
Gene Name	**TH**

Other Names
Tyrosine 3-monooxygenase, Tyrosine 3-hydroxylase, TH, Th

Target/Specificity
Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser40 conjugated to KLH.

Dilution
WB~~ 1:1000
IHC~~ 1:1000

Format
Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody 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.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Phospho-Ser40 Tyrosine Hydroxylase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

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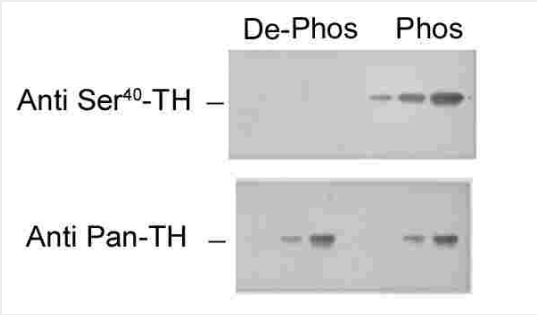
Phospho-Ser40 Tyrosine Hydroxylase Antibody - Protocols

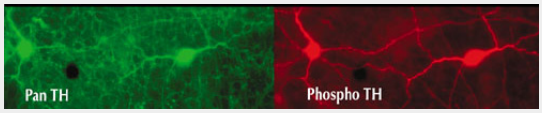
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Ser40 Tyrosine Hydroxylase Antibody - Images



Western blot of recombinant phospho- and dephospho-TH showing selective immunolabeling by the phospho-specific antibody of the ~60k TH phosphorylated at Ser40. The pan-specific antibody (anti-pan-TH) recognized both the phospho- and dephospho-TH while most importantly, the phospho-specific antibody(anti-ser40 TH),recognized only phospho-TH.



Immunohistochemical staining of retina with the pan-tyrosine hydroxylase (pan-TH) and phospho-specific tyrosine hydroxylase (phospho-TH) antibodies. The pan-TH antibody shows extensive labeling in this photomicrograph of the retina. In contrast, the phospho-TH antibody selectively labels only the two amacrine cells in this light-stimulated retina example.

Phospho-Ser40 Tyrosine Hydroxylase Antibody - 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; Jedynak 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.

Phospho-Ser40 Tyrosine Hydroxylase Antibody - References

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