

Anti-Tryptophan Hydroxylase (Ser260) Antibody

Our Anti-Tryptophan Hydroxylase (Ser260) rabbit polyclonal phosphospecific primary antibody from Pho
Catalog # AN1595

Specification

Anti-Tryptophan Hydroxylase (Ser260) Antibody - Product Information

Primary Accession	P09810
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	51068

Anti-Tryptophan Hydroxylase (Ser260) Antibody - Additional Information

Gene ID **24848**

Other Names

Indoleacetic acid 5 hydroxylase antibody, L tryptophan hydroxylase antibody, MGC119994 antibody, TPH 1 antibody, TPH antibody, TPH1 antibody, TPH1_HUMAN antibody, TPRH antibody, TRPH antibody, Tryptophan 5 hydroxylase 1 antibody, Tryptophan 5 monooxygenase 1 antibody, Tryptophan 5 monooxygenase antibody, Tryptophan 5-hydroxylase 1 antibody, Tryptophan 5-monooxygenase 1 antibody, Tryptophan hydroxylase 1 antibody

Target/Specificity

Tryptophan hydroxylase (TPH) catalyzes the 5-hydroxylation of tryptophan, which is the first step in the biosynthesis of indoleamines (serotonin and melatonin) (Martinez et al., 2001). In mammals, serotonin biosynthesis occurs predominantly in neurons which originate in the Raphe nuclei of the brain, and melatonin synthesis takes place within the pineal gland. Although TPH catalyzes the same reaction within the Raphe nuclei and the pineal gland, TPH activity is rate-limiting for serotonin but not melatonin biosynthesis. Serotonin functions mainly as a neurotransmitter, whereas melatonin is the principal hormone secreted by the pineal gland. The activity of TPH is enhanced by phosphorylation by cAMP-dependent protein kinase (PKA) and Ca²⁺/calmodulin kinase II (CaM K II) (Jiang et al., 2000; Johansen et al., 1996). CaM K II phosphorylates Ser-260 which lies within the regulatory domain of TPH (Jiang et al., 2000).

Format

Antigen Affinity Purified from Pooled Serum

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

Anti-Tryptophan Hydroxylase (Ser260) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

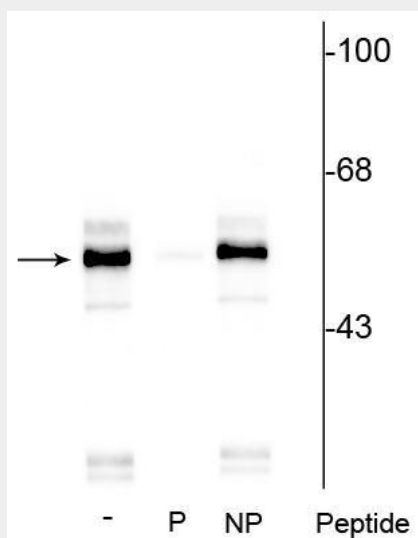
Blue Ice

Anti-Tryptophan Hydroxylase (Ser260) 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 Cytometry](#)
- [Cell Culture](#)

Anti-Tryptophan Hydroxylase (Ser260) Antibody - Images



Western blot of rat brainstem lysate showing specific immunolabeling of the ~55 kDa TPH protein phosphorylated at Ser260 in lane one (-). Phosphospecificity is shown in the second lane (P) where immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide (NP), shown in the third lane.

Anti-Tryptophan Hydroxylase (Ser260) Antibody - Background

Tryptophan hydroxylase (TPH) catalyzes the 5-hydroxylation of tryptophan, which is the first step in the biosynthesis of indoleamines (serotonin and melatonin) (Martinez et al., 2001). In mammals, serotonin biosynthesis occurs predominantly in neurons which originate in the Raphe nuclei of the brain, and melatonin synthesis takes place within the pineal gland. Although TPH catalyzes the same reaction within the Raphe nuclei and the pineal gland, TPH activity is rate-limiting for serotonin but not melatonin biosynthesis. Serotonin functions mainly as a neurotransmitter, whereas melatonin is the principal hormone secreted by the pineal gland. The activity of TPH is enhanced by phosphorylation by cAMP-dependent protein kinase (PKA) and Ca²⁺/calmodulin kinase II (CaM K II) (Jiang et al., 2000; Johansen et al., 1996). CaM K II phosphorylates Ser-260 which lies within the regulatory domain of TPH (Jiang et al., 2000).