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antibody and ELISA experts

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Anti-Phospho-Tryptophan Hydroxylase (Ser260) Antibody

Catalog Number: P01626

About TPH1

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).

Overview

Product Name	Anti-Phospho-Tryptophan Hydroxylase (Ser260) Antibody
Reactive Species	Human, Rat
Description	Boster Bio Anti-Phospho-Tryptophan Hydroxylase (Ser260) Antibody (Catalog # P01626). Tested in WB applications. This antibody reacts with Human, Rat.
Application	WB
Clonality	Polyclonal 608
Formulation	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.
Storage Instructions	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C. After date of receipt, stable for at least 1 year at -20°C.
Host	Rabbit
Uniprot ID	P09810

Technical Details

Immunogen	Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser260 of rat tryptophan hydroxylase (TPH), conjugated to keyhole limpet hemocyanin (KLH). Immunogen species is Rat.
Predicted Reactive Species	Bovine, Canine, Chicken, Mouse, Zebrafish
Cross Reactivity	No cross reactivity with other proteins.
Isotype	IgG
Form	Liquid

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Concentration	0.5-1mg/ml, actual concentration vary by lot. Use suggested dilution ratio to decide dilution procedure.
Purification	Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: WB: 1:1000

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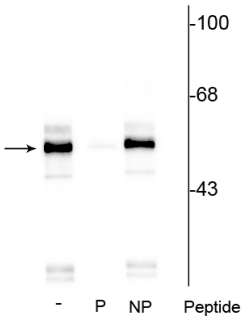
Anti-Phospho-Tryptophan Hydroxylase (Ser260) Antibody (P01626) Images



Western blot of rat brainstem lysate showing specific immunolabeling of the ~55 kDa TPH protein phosphorylated at Ser^{260} 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.