

Anti-Phospho-Tryptophan Hydroxylase 2 (Ser19) TPH2 Antibody

Catalog Number: P01643

About TPH2

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-19 which lies within the regulatory domain of TPH2 (McKinney et al., 2005).

Overview

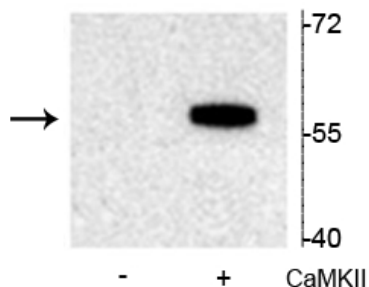
Product Name	Anti-Phospho-Tryptophan Hydroxylase 2 (Ser19) TPH2 Antibody
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Phospho-Tryptophan Hydroxylase 2 (Ser19) TPH2 Antibody (Catalog # P01643). Tested in WB applications. This antibody reacts with Mouse, Rat.
Application	WB
Clonality	Polyclonal 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	Q8CGU9

Technical Details

Immunogen	Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser19 of rat tryptophan hydroxylase 2 (TPH2), conjugated to keyhole limpet hemocyanin (KLH). Immunogen species is Rat.
Predicted Reactive Species	Bovine, Zebrafish
Cross Reactivity	No cross reactivity with other proteins.
Isotype	IgG
Form	Liquid

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	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>WB: 1:1000</p>

Anti-Phospho-Tryptophan Hydroxylase 2 (Ser19) TPH2 Antibody (P01643) Images



Western blot of recombinant tryptophan hydroxylase incubated in the absence (-) and presence (+) of Ca²⁺/calmodulin dependent kinase II showing specific immunolabeling of the ~55 kDa tryptophan hydroxylase protein phosphorylated at Ser¹⁹.

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