

Datasheet for 600-401-C97**Tryptophan Hydroxylase 1 phospho S58 Antibody****Overview**

Description:	Anti-Tryptophan Hydroxylase 1 pS58 (RABBIT) Antibody - 600-401-C97
Item No.:	600-401-C97
Size:	100 µL
Applications:	WB
Reactivity:	Rabbit
Host Species:	Rabbit

Product Details

Background:	Tryptophan Hydroxylase pS58 Antibody detects phosphorylated Tryptophan Hydroxylase protein. Tryptophan hydroxylase (TPH) catalyzes the 5-hydroxylation of tryptophan, which is the first step in the biosynthesis of indoleamines (serotonin and melatonin). 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 Ca ²⁺ /calmodulin kinase II (CaM K II). Both PKA and CaM K II phosphorylate Ser58 which lies within the regulatory domain of TPH.
Synonyms:	Tryptophan 5-hydroxylase 1, Tryptophan 5-monooxygenase 1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Tph1
Reactivity:	Rabbit
PTM Specificity:	Phosphorylation

Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Tryptophan Hydroxylase pS58 Antibody was produced by repeated immunizations with a synthetic phospho-peptide corresponding to amino acid residues surrounding Ser58.
Purity/Specificity:	Anti-Tryptophan Hydroxylase pS58 Antibody is directed against phosphorylated rat Tryptophan Hydroxylase protein. The antibody was affinity purified from monospecific antiserum by immunoaffinity purification and is specific for the phosphorylated protein. Reactivity is expected from the following species based on 100% sequence homology: bovine, chicken, human, mouse, non-human primate, rat, xenopus, and zebra fish.
Relevant Links:	• NCBI - 1094104.1 • UniProtKB - P09810 • GenelD - 24848

Application Details

Tested Applications:	WB
Application Note:	Anti-Tryptophan Hydroxylase pS58 (Rabbit) antibody is tested for use in Western Blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band of approximately 55 kDa in size corresponding to tryptophan hydroxylase proteins phosphorylated at Ser58 in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
WB:	1:1000

Formulation

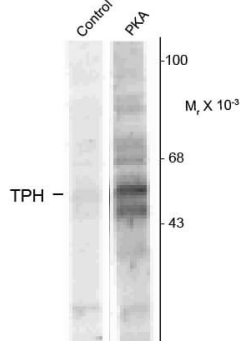
Physical State:	Liquid
Buffer:	0.01 M HEPES, 0.15 M Sodium Chloride, pH 7.5
Stabilizer:	0.1 mg/ml Bovine Serum Albumin (BSA) - IgG and Protease free, 50% (v/v) Glycerol

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

Anti-Phospho-Ser⁵⁸ Tryptophan Hydroxylase



Western blot of recombinant tryptophan hydroxylase in bacterial lysate incubated in the absence and presence of PKA showing phosphospecific immunolabeling of ~55k protein phosphorylated at Ser⁵⁸.

Western Blot

Western Blot of Rabbit anti-Tryptophan Hydroxylase Ser58 antibody. Lane 1: Recombinant tryptophan hydroxylase incubated in the absence of cAMP-dependent protein kinase (Control). Lane 2: Recombinant tryptophan hydroxylase incubated in the presence of cAMP-dependent protein kinase (PKA). Load: 10 µg per lane. Primary antibody: Tryptophan Hydroxylase Ser58 antibody at 1:1,000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 53 kDa for Tryptophan Hydroxylase Ser58. Other band(s): Tryptophan Hydroxylase Ser58 splice variants and isoforms.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.