Datasheet for 612-401-E48

# Tryptophan Hydroxylase 2 phospho S19 Antibody

## Overview

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| **Description:** | Anti-Tryptophan Hydroxylase 2 pS19 (RABBIT) Antibody - 612-401-E48 |
| **Item No.:** | 612-401-E48 |
| **Size:** | 100 µL |
| **Applications:** | WB |
| **Reactivity:** | Rat |
| **Host Species:** | Rabbit |

## Product Details

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| **Background:** | Tryptophan Hydroxylase 2 pS19 antibody detects TPH2 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 Ca2+/calmodulin kinase II (CaM K II). CaM K II phosphorylates Ser19 which lies within the regulatory domain of TPH2. Anti-TPH2pS19 antibody is ideal for investigators involved in Cell Signaling and Neuroscience research. |
| **Synonyms:** | Tryptophan 5-hydroxylase 2, Neuronal tryptophan hydroxylase, Tryptophan 5-monooxygenase 2, TPH |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Gene Name:** | TPH2 |
| **Reactivity:** | Rat |

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| **PTM Specificity:** | Phosphorylation |
| **Immunogen Type:** | Conjugated Peptide |
| **Immunogen:** | Anti-Tryptophan Hydroxylase 2 pS19 Antibody was produced in rabbit by repeated immunizations with synthetic phospho-peptide corresponding to amino acid residues surrounding Ser19 of Tryptophan Hydroxylase. |
| **Purity/Specificity:** | Anti-Tryptophan Hydroxylase 2 is directed against rat Tryptophan Hydroxylase phosphorylated at Ser19. Tryptophan Hydroxylase 2 pS19 antibodies are prepared from monospecific antiserum by immunoaffinity chromatography using phospho peptide coupled to agarose beads followed by solid phase adsorption(s) against non-phospho peptide and non-specific peptide to remove any unwanted reactivities. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum. Reactivity is expected from the following species based on 100% sequence homology: bovine, mouse and zebra fish. |
| **Relevant Links:** | • UniProtKB - Q8CGU9<br>• GeneID - 317675<br>• UniProtKB - Q8CGU9.1 |

## Application Details

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| **Tested Applications:** | WB |
| **Application Note:** | Anti-Trytophan Hydroxylase2 pS19 (Rabbit) antibody is tested for use in Western Blotting. Expect a band of approximately 55 kDa in size corresponding to tryptophan hydroxylase protein phosphorylated at Ser 19 in the appropriate cell lysate or extract. Researchers should determine optimal titers for applications that are not stated below. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **WB:** | 1:1000 |

## Formulation

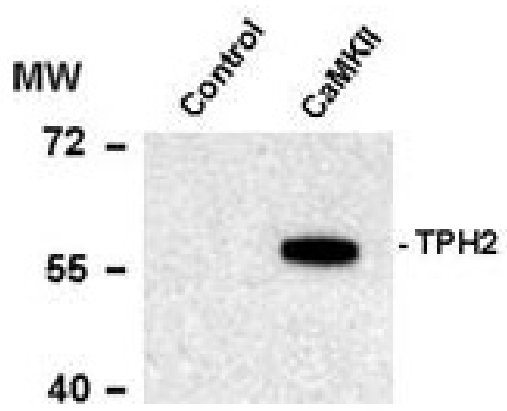
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| **Physical State:** | Liquid |
| **Buffer:** | 0.01 M HEPES, 0.15 M Sodium Chloride, pH 7.5 |
| **Stabilizer:** | 0.1 mg/ml Bovine Serum Albumin (BSA) - IgG and Protease free, 50% (v/v) Glycerol |

## Shipping & Handling

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| **Shipping Condition:** | Dry Ice |

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| **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




**Western Blot**
Western Blot of Rabbit anti-Tryptophan Hydroxylase pS19 antibody. Lane 1: Recombinant tryptophan hydroxylase incubated in the absence of Ca2+/calmodulin dependent kinase II (Control). Lane 2: Recombinant tryptophan hydroxylase incubated in the presence of Ca2+/calmodulin dependent kinase II (CaMKII). Load: 10 µg per lane. Primary antibody: Tryptophan Hydroxylase pS19 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: 55 kDa for Tryptophan Hydroxylase pS19. Other band(s): none.

## 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.