

Product Information

Anti-Tryptophan Hydroxylase

Developed in Sheep, Affinity Isolated Antibody

Product Number **T 8575**

Product Description

Anti-Tryptophan Hydroxylase is developed in sheep using recombinant rabbit tryptophan hydroxylase, isolated as inclusion bodies from *E. coli* and purified by preparative SDS-PAGE as immunogen. The antiserum is affinity purified using a column matrix consisting of soluble, partially purified, recombinant rabbit tryptophan hydroxylase coupled to AminoLink® Plus gel.

Anti-Tryptophan Hydroxylase specifically recognizes ~55 kDa human tryptophan hydroxylase protein. The antibody is used in dot blot, immunohistochemistry and immunoblotting applications. Based upon the relatively high degree of homology of tryptophan hydroxylase, the antibody should cross-react with other mammalian species.

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. Low turnover rate of this monoamine neurotransmitter is associated with impaired impulse control. The status of the TPH A779C allele as a marker for suicidality was replicated and linkage with alcoholism was also observed.

Reagent

The antibody is supplied in 150 mM NaCl, 10 mM HEPES, pH 7.5, 100 µg per ml BSA and 50% glycerol.

Storage/Stability

Store at -20 °C. The antibody is stable for at least 12 months when stored appropriately.

Product Profile

The amount of antibody is sufficient for 10 blots. A recommended working dilution of 1:1000 is determined by immunoblotting using human dorsal raphe nucleus

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

Anti-Tryptophan Hydroxylase (TPH)

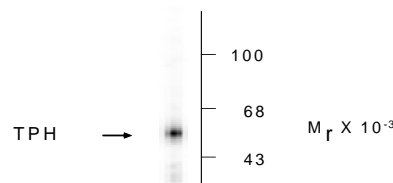


Figure 1 Immunoblot of human dorsal raphe nucleus. As shown in the autoradiograph, the antibody is specific for the ~55 kDa TPH protein.

References

1. Haycock, J.W., et al., A monoclonal antibody to tryptophan hydroxylase: applications and identification of the epitope, *J. Neurosci. Meth.*, **114**, 205-212, (2002).
2. Mann, J. J. et al., Possible association of a polymorphism of the tryptophan hydroxylase gene with suicidal behavior in depressed patients. *Am. J. Psychiatry*, **154**, 1451-1453 (1997).

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