

Tryptophan hydroxylase 2

Cat.No. 348 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For reconstitution add 200 µl H ₂ O, then aliquot and store at -20°C until use.
Applications	WB: not tested yet IP: not tested yet ICC: not tested yet IHC: 1 : 200 IHC-P/FFPE: 1 : 500
Immunogen	Recombinant protein corresponding to AA 1 to 139 from rat Tryptophanhydroxylase 2 (UniProt Id: Q8CGU9)
Reactivity	Reacts with: rat (Q8CGU9), mouse (Q8CGV2). Other species not tested yet.
Specificity	Specific for tryptophan hydroxylase 2

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Tryptophan hydroxylase (TPH) is an enzyme that catalyzes the 5-hydroxylation of tryptophan, which is the first step in the biosynthesis of indoleamines (serotonin and melatonin). Two isoforms TPH 1 and **TPH 2** have been described. TPH 1 occurs mainly in tissues that express serotonin in the periphery (skin, gut, pineal gland). TPH 2 is exclusively expressed in neuronal cell types and is the predominant isoform in the central nervous system. In mammals, serotonin biosynthesis occurs predominantly in neurons which originate in the Raphe nuclei of the brain.

Selected General References

Tryptophan hydroxylase-2: an emerging therapeutic target for stress disorders.
Chen GL, Miller GM
Biochemical pharmacology (2013) 85(9): 1227-33.

A structural approach into human tryptophan hydroxylase and its implications for the regulation of serotonin biosynthesis.
Martinez A, Knappskog PM, Haavik J
Current medicinal chemistry (2001) 8(9): 1077-91.

Regulation of tryptophan hydroxylase activity by a cyclic AMP-dependent mechanism in rat striatum.
Garber SL, Makman MH
Brain research (1987) 427(1): 1-10.