

## Tryptophan Hydroxylase 1/TPH-1 Protein, Human (His)

Cat. No.:	HY-P73566
Synonyms:	TPH; TPH-1; TPRH; Tryptophan 5-hydroxylase 1; Tryptophan Hydroxylase 1
Species:	Human
Source:	E. coli
Accession:	P17752 (I2-I444)
Gene ID:	7166
Molecular Weight:	Approximately 48 kDa

### PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris, 200 mM NaCl, 10% glycerol, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

#### Background

Tryptophan Hydroxylase 1 (TPH-1) Protein plays a pivotal role in serotonin biosynthesis by catalyzing the rate-determining step, which involves the oxidation of L-tryptophan to 5-hydroxy-L-tryptophan. This enzymatic activity is crucial for the synthesis of serotonin, a neurotransmitter with essential roles in various physiological processes, including mood regulation, sleep, and appetite. TPH-1's ability to convert L-tryptophan to 5-hydroxy-L-tryptophan is a key regulatory step in the serotonin pathway, highlighting its significance in neurotransmitter production and neurotransmission.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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