

## Product datasheet for **AP20275PU-N**

### Tryptophan Hydroxylase (TPH1) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	<b>Western blot:</b> 1/500-1/1000. <b>Immunohistochemistry on paraffin sections:</b> 1/50-1/200. <b>Immunofluorescence:</b> 1/50-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of TPH1 protein. (region surrounding Lys54)
Formulation:	Phosphate buffered saline (PBS), pH 7.2 State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.05% sodium azide
Concentration:	1.0 mg/ml
Purification:	Affinity-chromatography using epitope-specific immunogen; purity is > 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 51 kDa
Gene Name:	tryptophan hydroxylase 1
Database Link:	<a href="#">Entrez Gene 21990 Mouse</a> <a href="#">Entrez Gene 24848 Rat</a> <a href="#">Entrez Gene 7166 Human P17752</a>



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**Background:**

Phenylalanine hydroxylase (PAH), tyrosine hydroxylase (TH) and tryptophan hydroxylase (TPH) comprise a small family of monooxygenases that use tetrahydropterine as a cofactor during the catabolism of aromatic L-amino acids. PAH, TH and TPH all contain catalytic domains with an amino-terminal regulatory domain and a short carboxy-terminal tetramerization domain. Each of these enzymes also contains a single ferrous iron atom, which is bound to two histidines and a glutamate, and is likely to be involved in the formation of the hydroxylating intermediate. TPH is both the first- and rate-limiting-step in the biosynthesis of serotonin in the central nervous system and melatonin in the pineal gland. Alteration of TPH function may be a key factor in the pathology of several neuropsychiatric disorders associated with serotonin, including depression, aggression, alcoholism and schizophrenia. For instance, L-DOPA, which is used as a common therapy for Parkinson's disease (PD) patients, inhibits TPH function which, subsequently, is thought to contribute to the onset of depression in PD patients.

**Synonyms:**

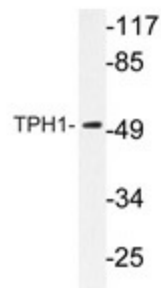
Tryptophan 5-monoxygenase 1, TPRH, TRPH

**Protein Families:**

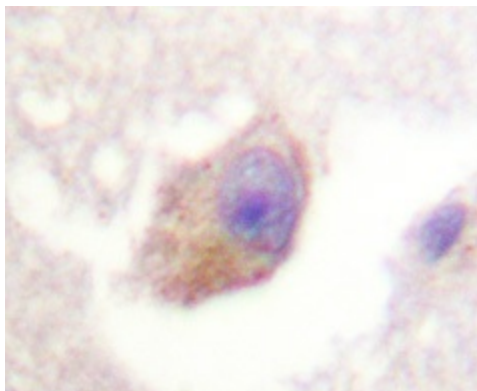
Druggable Genome

**Protein Pathways:**

Metabolic pathways, Tryptophan metabolism

**Product images:**


Western blot analysis of TPH1 antibody (Cat.-No.: AP20275PU-N) in extracts from HepG2 cells.



Immunohistochemistry analyzes of TPH1 antibody (Cat.-No.: AP20275PU-N) in paraffin-embedded human brain tissue.