

Human Tryptophan Hydroxylase 1 / TPH1 Protein (His Tag)

Catalog Number: 11931-H07E



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

TPRH; TRPH; Tph

Protein Construction:

A DNA sequence encoding the human TPH1 (P17752-1) (Ile 2-Ile 444) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human TPH1 consisting of 458 amino acids and has a calculated molecular mass of 52.7 kDa. It migrates as an approximately 48 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 200mM NaCl, 10% glycerol, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

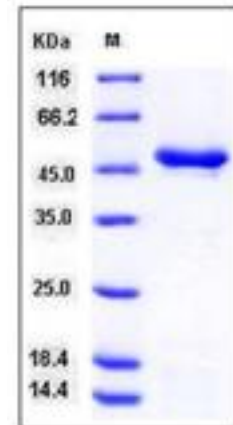
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Tryptophan 5-hydroxylase 1, also known as Tryptophan 5-monoxygenase 1, Tryptophan hydroxylase 1, TPH1, TPH and TPRH, is an enzyme which belongs to the bipterin-dependent aromatic amino acid hydroxylase family. TPH1 contains one ACT domain. Tryptophan hydroxylase catalyzes the bipterin-dependent monooxygenation of tryptophan to 5-hydroxytryptophan (5HT), which is subsequently decarboxylated to form the neurotransmitter serotonin. It is the rate-limiting enzyme in the biosynthesis of serotonin. It is the rate-limiting enzyme in the biosynthesis of serotonin. TPH1 expression is limited to a few specialized tissues: raphe neurons, pinealocytes, mast cells, mononuclear leukocytes, beta-cells of the islets of Langerhans, and intestinal and pancreatic enterochromaffin cells. The tryptophan hydroxylase 1 (TPH1) gene is also reported to be associated with suicidal behavior. Polymorphisms of TPH1 may assist in identifying a subgroup of mood disorder patients that is at higher risk for suicidal behavior.

References

1. Antonia S. New, et al., 1998, American Journal of Medical Genetics Part B. 81 (1): 13-17.
2. Y. C Wang, et al., 2001, Neuropsychobiology. 43 (1): 1 - 4.
3. Diego J. et al., 2003, Science. 299 (5603): 76.

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