



Recombinant Protein Technical Manual

**Recombinant Human Tryptophan Hydroxylase
1/TPH1 Protein (His Tag)**
RPES4666

Product Data:

Product SKU: RPES4666

Size: 20µg

Species: Human

Expression host: E. coli

Uniprot: P17752

Protein Information:

Molecular Mass: 52.7 kDa

AP Molecular Mass: 48 kDa

Tag: N-His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

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

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: TPRH;TRPH

Immunogen Information:

Sequence: Ile 2-Ile 444

Background:

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 biopterin-dependent aromatic amino acid hydroxylase family. TPH1 contains one ACT domain. Tryptophan hydroxylase catalyzes the biopterin-dependent monoxygenation 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.