

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

**Catalog Number:** PKSH030968

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

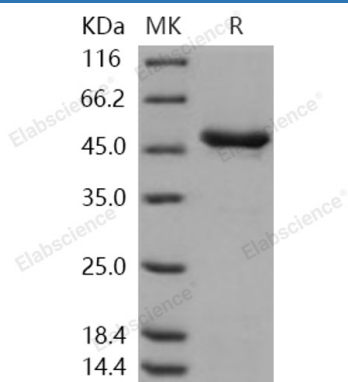
### Description

<b>Species</b>	Human
<b>Source</b>	E.coli-derived Human Tryptophan Hydroxylase 1/TPH1 protein Ile 2-Ile 444, with an N-terminal His
<b>Calculated MW</b>	52.7 kDa
<b>Observed MW</b>	48 kDa
<b>Accession</b>	P17752-1
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	Please contact us for more information.
<b>Storage</b>	Generally, 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.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 20mM Tris, 200mM NaCl, 10% glycerol, pH 8.0 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data



> 95 % as determined by reducing SDS-PAGE.

### Background

### For Research Use Only

Tryptophan 5-hydroxylase 1, also known as Tryptophan 5-monooxygenase 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.