

[Go to Product page](#)

Datasheet for ABIN7317803

**Tyrosine Hydroxylase Protein (TH) (His tag)**

## Overview

Quantity:	50 µg
Target:	Tyrosine Hydroxylase (TH)
Origin:	Human
Source:	Baculovirus infected Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Tyrosine Hydroxylase protein is labelled with His tag.

## Product Details

Purpose:	Recombinant Human TH/Tyrosine Hydroxylase Protein (His Tag)
Sequence:	Pro 2-Gly 497
Characteristics:	A DNA sequence encoding the human TH isoform 2 (P07101-3) (Pro 2-Gly 497) was fused with a polyhistidine tag at the N-terminus.
Purity:	> 94 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.

## Target Details

Target:	Tyrosine Hydroxylase (TH)
Alternative Name:	TH/Tyrosine Hydroxylase ( <a href="#">TH Products</a> )
Background:	Background: Tyrosine hydroxylase (TH) is a rate-limiting enzyme in catecholamine synthesis. Tyrosine hydroxylase activity is modulated by protein-protein interactions with enzymes in the same pathway or the tetrahydrobiopterin pathway, structural proteins considered to be

## Target Details

chaperones that mediate the neuron's oxidative state. It is phosphorylated at serine (Ser) residues Ser8, Ser19, Ser31 and Ser40 in vitro. The phosphorylation of tyrosine hydroxylase at Ser19 or Ser8 has no direct effect on tyrosine hydroxylase activity. As tyrosine hydroxylase (TH) catalyses the formation of L-DOPA, the rate-limiting step in the biosynthesis of DA, the Parkinson's disease (PD) can be considered as a TH-deficiency syndrome of the striatum. A direct pathogenetic role of TH has also been suggested, as the enzyme is a source of reactive oxygen species (ROS) in vitro and a target for radical-mediated oxidative injury. Recently, it has been demonstrated that L-DOPA is effectively oxidized by mammalian Tyrosine hydroxylase in vitro, possibly contributing to the cytotoxic effects of DOPA.

Synonym: DYT14,DYT5b,TYH

Molecular Weight: 57.6 kDa

Pathways: [Dopaminergic Neurogenesis](#), [Response to Water Deprivation](#), [Sensory Perception of Sound](#), [Carbohydrate Homeostasis](#), [Feeding Behaviour](#)

## Application Details

Restrictions: For Research Use only

## Handling

Format: Lyophilized

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

Buffer: Lyophilized from sterile 20 mM Tris, 500 mM NaCl, pH 8.0, 10 % glycerol

Storage: 4 °C,-20 °C,-80 °C

Storage Comment: 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.