

Recombinant Mouse TH protein (His tag)

Catalog Number:PDEM100043



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

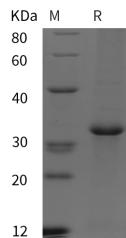
Description

Synonyms	DYT14;DYT5b;YH;TH;The;TY3H;TYH;Tyrosine 3 hydroxylase
Species	Mouse
Expression Host	E.coli
Sequence	Phe 34-Leu 301
Accession	P24529
Calculated Molecular Weight	29.4 kDa
Observed molecular weight	32 kDa
Tag	N-His

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	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.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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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 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-

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DOPA is effectively oxidized by mammalian Tyrosine hydroxylase in vitro, possibly contributing to the cytotoxic effects of DOPA.

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