Recombinant Mouse Th protein, His-tagged

Cat. No. Th-25M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant mouse Th, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.
Species	Mouse
Source	Insect Cells
Description	Th, also known as tyrosine 3-monooxygenase, is a rate-limiting enzyme in catecholamine synthesis. It uses tetrahydrobiopterin and molecular oxygen to convert tyrosine to DOPA. It regulates dopamine (DA) neurotransmission at the biosynthesis and reuptake steps. It plays an important role in the physiology of adrenergic neurons. It effects overexpression in lymphocytes on the differentiation and function of T helper cells.
Form	Liquid. In Phosphate Buffered Saline (pH 7.4) containing 10% glycerol.
Molecular Mass	57.0kDa (507aa) 50-70kDa (SDS-PAGE under reducing conditions)
AA Sequence	ADPMPTPSAS SPQPKGFRRA VSEQDTKQAE AVTSPRFIGR RQSLIEDARK EREAAAAAAA AAVASAEPGN PLEAVVFEER DGNAVLNLLFSLRGTKPSSL SRALKVFETF EAKIHHLETR PAQRPLAGSP HLEYFVRFEV PSGDLAALLS SVRRVSDDVR SAREDKVPWF PRKVSELDKCHHLVTKFDPD LDLDHPGFSD QAYRQRRKLI AEIAFQYKQG EPIPHVEYTK EEIATWKEVY ATLKGLYATH ACREHLEAFQ LLERYCGYREDSIPQLEDVS HFLKERTGFQ LRPVAGLLSA

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	RDFLASLAFR VFQCTQYIRH ASSPMHSPEP DCCHELLGHV PMLADRTFAQ FSQDIGLASL GASDEEIEKL STVYWFTVEF GLCKQNGELK AYGAGLLSSY GELLHSLSEE PEVRAFDPDT AAVQPYQDQT YQPVYFVSES FSDAKDKLRNYASRIQRPFS VKFDPYTLAI DVLDSPHTIR RSLEGVQDEL HTLTQALSAI SHHHHHH
Endotoxin	< 1.0 EU per 1 microgram of protein (determined by LAL method)
Purity	> 90% by SDS - PAGE
Storage	Can be stored at +4centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20centigrade or -70centigrade. Avoid repeated freezing and thawing cycles.
Concentration	0.25mg/ml (determined by Absorbance at 280nm)

GENE INFORMATION

Gene Name	Th tyrosine hydroxylase [Mus musculus]
Official Symbol	Th
Synonyms	TH; tyrosine hydroxylase; tyrosine 3-monooxygenase; tyrosine 3-hydroxylase;
Gene ID	21823
mRNA Refseq	NM_009377
Protein Refseq	NP_033403
Pathway	Amine-derived hormones, organism-specific biosystem; Amphetamine addiction,

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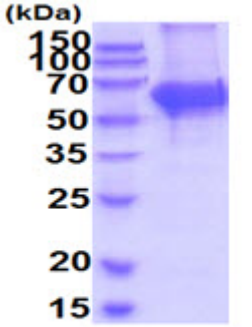
	organism-specific biosystem; Amphetamine addiction, conserved biosystem; Biogenic Amine Synthesis, organism-specific biosystem; Catecholamine biosynthesis, organism-specific biosystem; Catecholamine biosynthesis, tyrosine => dopamine =>
Function	amino acid binding; dopamine binding; ferric iron binding; ferrous iron binding; iron ion binding; metal ion binding; monooxygenase activity; oxidoreductase activity; oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen, reduced pteridine as one donor, and incorporation of one atom of oxygen; oxygen binding; protein domain specific binding; tetrahydrobiopterin binding; tyrosine 3-monooxygenase activity; tyrosine 3-monooxygenase activity;
	 15% SDS-PAGE (3ug)

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