

Recombinant Human Tryptophan 2,3-Dioxygenase, His-tagged

Cat. No. TDO2-2503H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human TDO2 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques. MW: 50.0 kDa.
Species	Human
Source	E.coli
ProteinLength	1-406aa
Description	TDO2, also known as TDO, is a ferrous heme enzyme that catalyzes the first and rate-limiting step in the kynurenine pathway, the major pathway of tryptophan metabolism. It incorporates oxygen into the indole moiety of tryptophan. It has a broad specificity towards tryptamine and derivatives including D- and L-tryptophan, 5-hydroxytryptophan and serotonin.
Form	Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 0.2M NaCl, 5mM DTT, 1mM EDTA, 30% glycerol.
Molecular Mass	50.0 kDa (426aa), confirmed by MALDI-TOF
AA Sequence	MGSSHHHHHH SSGLVPRGSH MSGCPFLGNN FGYTFFKKLPV EGSEEDKSQT GVNRASKGGL IYGNYLHLEK VLNAQELQSE TKGNIKHDEH LFIITHQAYE LWFKQILWEL DSVREIFQNG HVRDERNMLK VVSRMHRVSV ILKLLVQQFS ILETMTALDF NDFREYLSPA SGFQSLQFRL LENKIGVLQN MRVPYNRRHY RDNFKGEENE LLLKSEQEKT LLELVEAWLE RTPGLEPHGF NFWGKLEKNI

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TRGLEEEFIR IQAKEESEK EEQVAEFQKQ KEVLLSLFDE KRHEHLLSKG
 ERRLSYRALQ GALMIYFYRE EPRFQVPFQL LTLMDIDSL MTKWRYNHVC
 MVHRMLGSKA GTGGSSGYHY LRSTVSDRYK VFVDLFNLST YLIPRHWIPK
 MNPTIHKFLY TAEYCDSSYF SSDESD

Purity >90% by SDS-PAGE

Applications SDS-PAGE

Storage Can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

Concentration 0.25 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name TDO2 tryptophan 2,3-dioxygenase [Homo sapiens]

Official Symbol TDO2

Synonyms TDO2; tryptophan 2,3-dioxygenase; TDO; TPH2; tryptophanase; tryptophan oxygenase; tryptophan pyrrolase; tryptamin 2,3-dioxygenase; TO; TRPO;

Gene ID 6999

mRNA Refseq NM_005651

Protein Refseq NP_005642

MIM 191070

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UniProt ID	P48775
Chromosome Location	4q31-q32
Pathway	Metabolic pathways, organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of amino acids and derivatives, organism-specific biosystem; Monoamine Transport, organism-specific biosystem; NAD biosynthesis II (from tryptophan), organism-specific biosystem; NAD biosynthesis II (from tryptophan), conserved biosystem; Tryptophan catabolism, organism-specific biosystem;
Function	amino acid binding; heme binding; metal ion binding; oxidoreductase activity; oxygen binding; tryptophan 2,3-dioxygenase activity;

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