

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

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

## SPECIFICATION

<b>Product Overview</b>	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.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>ProteinLength</b>	1-406aa
<b>Description</b>	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.
<b>Form</b>	Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 0.2M NaCl, 5mM DTT, 1mM EDTA, 30% glycerol.
<b>Molecular Mass</b>	50.0 kDa (426aa), confirmed by MALDI-TOF
<b>AA Sequence</b>	MGSSHHHHHH SSGLVPRGSH MSGCPFLGNN FGYTFKKLPV EGSEEDKSQT GVMRASKGGL IYGNYLHLEK VLNAQELQSE TKGKNIHDEH LFIITHQAYE LWFKQILWEL DSVREIFQNG HVRDERNMLK VVSRMHRVSV ILKLLVQQFS ILETMTALDF NDFREYLSPA SGFQSLQFRL LENKIGVLQN MRVPYNNRRHY RDNFKGEENE LLLKSEQEKT LLELVEAWLE RTPGLEPHGF NFWGKLEKNI

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TRGLEEEFIR IQAKEESEK EEQVAEFQKQ KEVLLSLFDE KRHEHLLSKG  
 ERRLSYRALQ GALMIYFYRE EPRFQVPFQL LTSLMDIDSL MTKWRYNHVC  
 MVHRMLGSKA GTGGSSGYHY LRSTVSDRYK VFVDLNLST 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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<b>UniProt ID</b>	P48775
<b>Chromosome Location</b>	4q31-q32
<b>Pathway</b>	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;
<b>Function</b>	amino acid binding; heme binding; metal ion binding; oxidoreductase activity; oxygen binding; tryptophan 2,3-dioxygenase activity;

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