

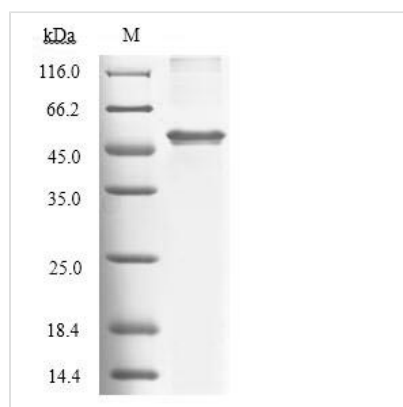


# Recombinant Human Tryptophan 2,3-dioxygenase (TDO2)

<b>Product Code</b>	CSB-YP023351HU
<b>Relevance</b>	Incorporates oxygen into the indole moiety of tryptophan. Has a broad specificity towards tryptamine and derivatives including D- and L-tryptophan, 5-hydroxytryptophan and serotonin .
<b>Abbreviation</b>	Recombinant Human TDO2 protein
<b>Storage</b>	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
<b>Uniprot No.</b>	P48775
<b>Alias</b>	Tryptamin 2,3-dioxygenase
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	Greater than 90% as determined by SDS-PAGE.
<b>Sequence</b>	MSGCPFLGNNFGYTFKKLPVEGSEEDKSQTGVNRASKGGLIYGNYLHLEKVL NAQELQSETKGNKIHDEHLFIITHQAYELWFKQILWELDSVREIFQNGHVNDER NMLKVVSRMHRVSVILKLLVQQFSILETMTALDFNDFREYLSPASGFQSLQFRL LENKIGVLQNMVRVPYNRRHYRDNFKGEENELLLKSEQEKTLLELVEAWLERTP GLEPHGFNFWGKLEKNITRGLEEEFIRIQAKEESEEEKEEQVAEFQKQKEVLLSL FDEKRHEHLLSKGERRLSYRALQGALMIYFYREEPRFQVPFQLTSLMDIDSL MTKWRYNHVCMVHRMLGSKAGTGGSSGYHYLRSTVSDRYKVFVDLNLSTY LIPRHWIPKMNP TIHKFLYTA EYCDSSYFSSDESD
<b>Research Area</b>	Metabolism
<b>Source</b>	Yeast
<b>Target Names</b>	TDO2
<b>Protein Names</b>	Recommended name: Tryptophan 2,3-dioxygenase Short name= TDO EC= 1.13.11.11 Alternative name(s): Tryptamin 2,3-dioxygenase Tryptophan oxygenase Short name= TO Short name= TRPO Tryptophan pyrrolase Tryptophan
<b>Expression Region</b>	1-406aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal 6xHis-tagged
<b>Mol. Weight</b>	49.9kDa
<b>Protein Length</b>	Full Length



## Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

In the production of recombinant Human TDO2 protein, the gene for TDO2 (Yeast) was cloned into a vector and expressed as TDO2 protein in Yeast. The plasmids with the copy of TDO2, or the expression vector, were often used to enhance gene expression. Every step of production was undergone with a strict QC system. N-terminal 6xHis tag was used in the process. The purity is 90% determined by SDS-PAGE.

TDO2, indoleamine 2,3-dioxygenase 1 (IDO1), and IDO2 are three enzymes that catalyze the amino acid tryptophan into kynurenine in the kynurenine pathway, which accounts for 95% of tryptophan catabolism. TDO2 is mainly expressed in the liver and exists in the brain, while IDO1 and IDO2 have wider tissue expression, including in peripheral blood and immune cells. TDO2 plays an important role in neurological diseases such as Alzheimer's disease, Parkinson's disease, and autism. TDO2 is expressed in several established human cancer cell lines, including glioblastoma, colorectal carcinoma, head and neck carcinoma, and gallbladder carcinoma cells. Overexpression of TDO2 promoted tumor cell survival and was correlated with tumor grade and poor prognosis in triple negative breast cancer and in brain tumors. Besides, expression of TDO2 has been reported in human colorectal cancer and leiomyosarcoma.

## Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

## Shelf Life

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