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# Product datasheet for TP302777M

## TDO2 (NM_005651) Human Recombinant Protein

### Product data:

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| **Product Type:** | Recombinant Proteins |
| **Description:** | Recombinant protein of human tryptophan 2,3-dioxygenase (TDO2), 100 µg |
| **Species:** | Human |
| **Expression Host:** | HEK293T |
| **Expression cDNA Clone or AA Sequence:** | >RC202777 protein sequence<br>Red=Cloning site Green=Tags(s)<br><br>MSGCPFLGNNFGYTFKKLPVEGSEEDKSQTGVNRASKGGLIYGNYLHLEKVLNAQELQSETKGNKIHDEH<br>LFIITHQAYELWFKQILWELDSVREIFQNGHVRDERNMLKVVSRMHRVSVILKLLVQQFSILETMTALDF<br>NDFREYLSPASGFQSLQFRLLENKIGVLQNMRVPYNRRHYRDNFKGEENELLLKSEQEKTLLELVEAWLE<br>RTPGLEPHGFNFWGKLEKNITRGLEEEFIRIQAKEESEEKEEQVAEFQKQKEVLLSLFDEKRHEHLLSKG<br>ERRLSYRALQGALMIYFYREEPRFQVPFQLLTSLMDIDSLMTKWRYNHVCMVHRMLGSKAGTGGSSGYHY<br>LRSTVSDRYKVFVDLFNLSTYLIPRHWIPKMNPTIHKFLYTAEYCDSSYFSSDESD<br><br>TRTRPLEQKLISEEDLAANDILDYKDDDDKV |
| **Tag:** | C-Myc/DDK |
| **Predicted MW:** | 47.7 kDa |
| **Concentration:** | >0.05 µg/µL as determined by microplate BCA method |
| **Purity:** | > 80% as determined by SDS-PAGE and Coomassie blue staining |
| **Buffer:** | 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol |
| **Bioactivity:** | The specific activity of TDO2 was determined by monitoring Kynurenine formation from the N-formylkynurenine based on the absorbance at 492nm. The N-formylkynurenine was produced from a conversion of tryptophan with TDO2. The reactions were carried out at 37°C for 40min in 100ul of the reaction volume containing 200mM PBS, pH7.5, 1mM ascorbic acid, and 1.25mM L-tryptophan as the substrate with various amounts of TDO2. The reaction was terminated by adding 50ul of 30% (w/v) trichloroacetic acid. The sample was further incubated for 30min at 60°C and centrifuged at 12000 rpm for 15 min. The supernatant was used to mix with an equal volume of Ehrlich's reagent (2% p-dimethylaminobenza-ldehyde in glacial acetic acid) to measure the absorbance at 492 nm after 10min incubation |

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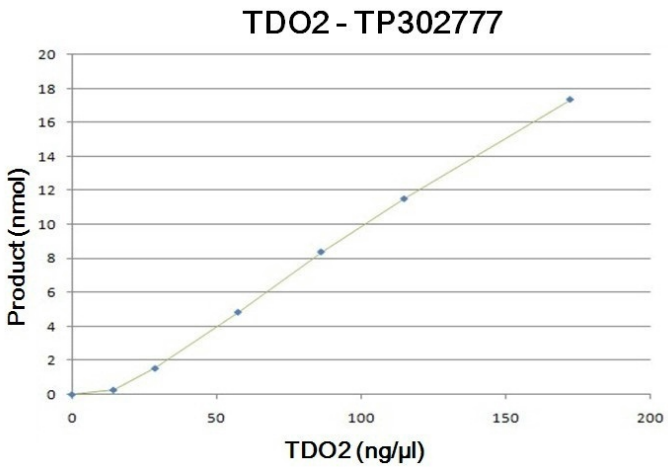
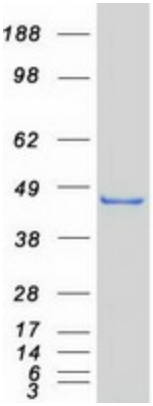
| **Preparation:** | Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps. |
| **Note:** | For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process. |
| **Storage:** | Store at -80°C. |
| **Stability:** | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles. |
| **RefSeq:** | NP_005642 |
| **Locus ID:** | 6999 |
| **UniProt ID:** | P48775 |
| **RefSeq Size:** | 1703 |
| **Cytogenetics:** | 4q32.1 |
| **RefSeq ORF:** | 1218 |
| **Synonyms:** | HYPTRP; TDO; TO; TPH2; TRPO |
| **Summary:** | This gene encodes a heme enzyme that plays a critical role in tryptophan metabolism by catalyzing the first and rate-limiting step of the kynurenine pathway. Increased activity of the encoded protein and subsequent kynurenine production may also play a role in cancer through the suppression of antitumor immune responses, and single nucleotide polymorphisms in this gene may be associated with autism. [provided by RefSeq, Feb 2012] |
| **Protein Pathways:** | Metabolic pathways, Tryptophan metabolism |

## Product images:






Coomassie blue staining of purified TDO2 protein (Cat# [TP302777]). The protein was produced from HEK293T cells transfected with TDO2 cDNA clone (Cat# [RC202777]) using MegaTran 2.0 (Cat# [TT210002]).