

# Recombinant human IDO protein

Catalog Number: ATGP3488

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-403aa

### UniProt No.

P14902

### NCBI Accession No.

NP\_002155

### Alternative Names

Indoleamine 2,3-dioxygenase 1, IDO, IDO-1, INDO

## PRODUCT SPECIFICATION

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### Molecular Weight

47.7 kDa (426aa) confirmed by MALDI-TOF

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.15M NaCl, 20% glycerol, 1mM DTT

### Purity

> 90% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Specific activity is > 300pmol/min/ug, and is defined as the amount of enzyme that hydrolyze 1.0pmole of L-Tryptophan to N-formyl-L-kynurenine per minute at pH 6.5 at 25C.

### Tag

His-Tag

### Application

Enzyme Activity, SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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# Recombinant human IDO protein

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## Description

IDO1 is an indoleamine 2, 3-dioxygenase - a heme enzyme that catalyzes the first and rate-limiting step in tryptophan catabolism to N-formyl-kynurenine. This enzyme acts on multiple tryptophan substrates including D-tryptophan, and serotonin. It is thought to play a role in a variety of pathophysiological processes such as antimicrobial and antitumor defense, neuropathology, immunoregulation, and antioxidant activity. Through its expression in dendritic cells, monocytes, and macrophages this enzyme modulates T-cell behavior by its pericellular catabolization of the essential amino acid tryptophan. Recombinant human IDO1 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

## Amino acid Sequence

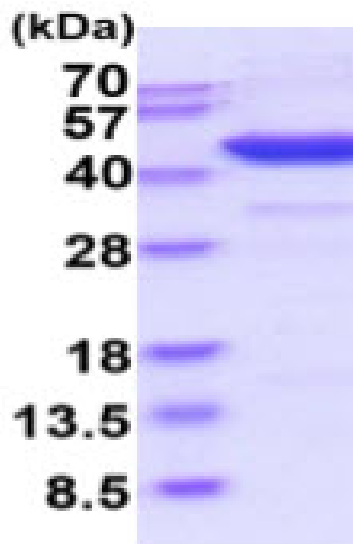
MGSSHHHHHH SGLVPRGSH MGSMAHAMEN SWTISKEYHI DEEVGFALPN PQENLPDFYN DWMFIAKHLP DLIESGQLRE RVEKLNMLSI DHLTDHKSQR LARLVGCIT MAYVWGKGHG DVRKVLPRNI AVPYCQLSKK LELPPILVYA DCVLANWKKK DPNKPLTYEN MDVLFSTRDG DCSKGFLLVS LLVEIAAASA IKVIPTVFKA MQMQERDTLL KALLEIASCL EKALQVFHQI HDHVNPKAFF SVLRIYLSGW KGNPQLSDGL VYEGFWEDPK EFAGGSAGQS SVFQCFDVLL GIQQTAGGGH AAQFLQDMRR YMPPAHRNFL CSLESNPSVR EFVLSKGDAG LREAYDACVK ALVSLRSYHL QIVTKYILIP ASQQPKENKT SEDPSKLEAK GTGGTDL MNF LKTVRSTTEK SLLKEG

## General References

Metz R., et al (2007). Nature Cancer Res. 67:7082-7087  
 Yuasa H.J., et al (2007). J. Mol. Evol. 65:705-714

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)