

Recombinant human IDO protein

Catalog Number: ATGP3488

PRODUCT INFORMATION

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

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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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

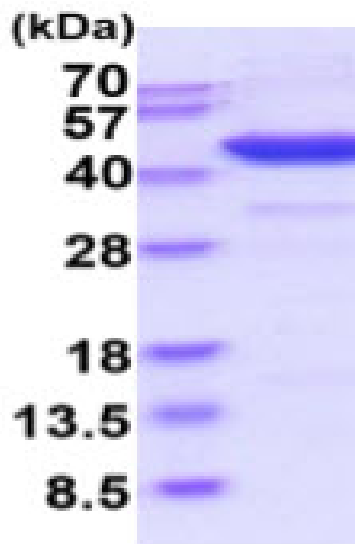
MGSSHHHHHH SGLVPRGSH MGSMAHAMEN SWTISKEYHI DEEVGFALPN PQENLPDFYN DWMFIAKHLP DLIESGQLRE
RVEKLNMLSI DHLTDHKSQR LARLVLCIT MAYVWGKGHG DVRKVLPRNI AVPYCQLSKK LELPPILVYA DCVLANWKKK
DPNKPLTYEN MDVLFSTRDG DCSKGFFLVV LLVEIAAASA IKVIPTVFKA MQMQERDTLL KALLEIASCL EKALQVFHQI
HDHVNPKAFF SVLRIYLSGW KGNPQLSDGL VYEGFWEDPK EFAGGSAGQS SVFQCFDVLL GIQQTAGGGH AAQFLQDMRR
YMPPAHRNFL CSLESNPSVR EFVLSKGDAG LREAYDACVK ALVSLRSYHL QIVTKYILIP ASQQPKENKT SEDPSKLEAK
GTGGTDLNMF 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)