

Active Recombinant Mouse Ido1 Protein, His-tagged

Cat. No. Ido1-7432M Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Mouse Ido1(Ala2-Pro407) fused with an N-terminal Met and 6-His tag was expressed in E. coli.

Species Mouse

Source E.coli

ProteinLength Ala2-Pro407

Description

Indoleamine 2,3-dioxygenase (IDO) is a heme-containing intracellular dioxygenase that catalyzes the degradation of the essential amino acid L-tryptophan to N formyl kynurenine. This degradation is the first and rate-limiting step of the L-kynurenine pathway. IDO expression is induced in macrophages, plasmacytoid dendritic cells (pDC), and microglia by multiple inflammatory stimuli including IFN-g, TNF-a, CpG DNA, HIV-1 Tat protein, microbial infection, or GITR Ligand activation. It can be expressed by tumor cells, pDC in tumor draining lymph nodes, and MDSC in breast cancer. IDO expression is critical for the ability of these cells to induce the activation of resting Treg and the support of immune tolerance to apoptotic cell debris. These cells also suppress anti-tumor immunity, the development of autoimmunity, and the replication of Chlamydia, Herpes simplex virus, and measles virus. In the absence of IDO function, activation of pDC does not induce immunosuppression but instead triggers IL-6 production and the redirecting of Treg to produce IL-17. Mouse IDO shares 61% and 87% amino acid sequence identity with human and rat IDO, respectively.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Predicted N Terminal	Met
Form	Supplied as a 0.2 µm filtered solution in Sodium Acetate, NaCl and Glycerol.
Bio-activity	Measured by its ability to oxidize L-tryptophan to N-formyl-kynurenine. The specific activity is >1,000 pmol/min/µg.
Molecular Mass	redicted Molecular Mass: 46 kDa; SDS-PAGE: 41 kDa, reducing conditions.
Endotoxin	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 centigrade as supplied. 3 months, -20 to -70 centigrade under sterile conditions after opening.

GENE INFORMATION

Gene Name	Ido1 indoleamine 2,3-dioxygenase 1 [Mus musculus]
Official Symbol	Ido1
Synonyms	IDO1; indoleamine 2,3-dioxygenase 1; IDO-1; indole 2,3-dioxygenase; indoleamine-pyrrole 2,3 dioxygenase; indoleamine-pyrrole 2,3-dioxygenase; Ido; Indo;
Gene ID	15930
mRNA Refseq	NM_008324

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