

IDO1 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Indo; indoleamine 2,3-dioxygenase 1; Ido
Protein Construction:	A DNA sequence encoding the Mouse IDO1 (P28776) (Met1-Pro407) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Met 1
Species:	Mouse
Expression Host:	E. coli
Accession:	P28776
Molecular Weight:	46.47 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 90 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 150 mM NaCl, 10% Glycerol, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Indoleamine 2,3-dioxygenase-1, also known as Indoleamine-pyrrole 2,3-dioxygenase, IDO1, and IDO, is a member of the indoleamine 2,3-dioxygenase family. IDO1 / IDO and tryptophan 2,3-dioxygenase (TDO) are tryptophan-degrading enzymes that catalyze the first step in tryptophan catabolism via the kynurenine pathway. TDO is widely distributed in both eukaryotes and bacteria. In contrast, IDO has been found only in mammals and yeast. In 27, a third enzyme, indoleamine 2,3-dioxygenase-2 (IDO2), was discovered. IDO2 is found not only in

mammals but also in lower vertebrates. IDO1 / IDO is an immunosuppressive molecule inducible in various cells. IDO1 / IDO catalyzes the cleavage of the pyrrole ring of tryptophan and incorporates both atoms of a molecule of oxygen. It mediates oxidative cleavage of tryptophan, an amino acid essential for cell proliferation and survival. IDO1 / IDO inhibition is proposed to have therapeutic potential in immunodeficiency-associated abnormalities, including cancer. The IDO pathway is activated in multiple tumor types. Selective inhibition of IDO1 may represent an attractive cancer therapeutic strategy via up-regulation of cellular immunity. IDO1 / IDO is an enzyme that suppresses adaptive T-cell immunity by catabolizing tryptophan from the cellular microenvironment. Inhibition of IDO pathway might enhance the efficacy of immunotherapeutic strategies for cancer. Cancer Immunotherapy Co-inhibitory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Detection: ELISA Antibodies Immunotherapy Targeted Therapy

Reference

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