



Recombinant Protein Technical Manual

Recombinant Human IDO1/IDO Protein (Active)

RPES1143

Product Data:

Product SKU: RPES1143

Size: 10 μ g

Species: Human

Expression host: E. coli

Uniprot: NP_002155.1

Protein Information:

Molecular Mass: 45.2 kDa

AP Molecular Mass: 46 kDa

Tag:

Bio-activity: Measured by its ability to oxidize L-tryptophan to N-formylkynurenine. The specific activity is > 500 pmoles/min/ μ g.

Purity: > 85 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

Shipping: This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.

Formulation: Lyophilized from sterile 50 mM NaAC, 100 mM NaCl, 20 % glycerol, pH 5.5

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Indole 2;3-dioxygenase; Indoleamine 2;3-dioxygenase 1; IDO; IDO1; IDO; INDO

Immunogen Information:

Sequence: Ala2-Gly403

Background:

Indoleamine 2,3-dioxygenase, 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 2007, 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 pyrrol 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.