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Datasheet for ABIN5564386

IDO1 Protein (AA 1-403) (His tag)

Overview

Quantity:	50 µg
Target:	IDO1
Protein Characteristics:	AA 1-403
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This IDO1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS)

Product Details

Cross-Reactivity:	Human
Characteristics:	Human IDO (aa 1-403) is fused at the N-terminus to a His-tag.
Purity:	>90 % (SDS-PAGE)
Sterility:	0.2 µm filtered
Endotoxin Level:	<0.1EU/µg purified protein (LAL test, Lonza).

Target Details

Target:	IDO1
Alternative Name:	IDO (IDO1 Products)

Target Details

Background: IDO is a heme enzyme that catalyzes the first and rate-limiting step in the main pathway of human tryptophan catabolism, the kynurenine pathway, causing depletion of tryptophan which can lead to halted growth of microbes as well as T cells. IDO is an immune checkpoint protein, thought to play a role in a variety of pathophysiological processes such as antimicrobial and antitumor defense, neuropathology, immunoregulation and antioxidant activity. Cancer cells are able to evade the immune system by hijacking the checkpoint proteins. Increased IDO protein levels drive growth arrest and apoptosis of the effector T cells, a group of immune cells that mediate the immune system's ability to destroy pathogens. By reducing the number of effector T cells, IDO overexpression prevents the immune system from effectively destroying cancer cells. IDO overexpression has been observed in a wide range of human cancers such as prostatic, colorectal, pancreatic, cervical, gastric, ovarian, head or lung cancer. Physiological IDO activity has been implicated in T cell tolerance to tumors, dysfunctional selftolerance in non-obese diabetic (NOD) mice, and as a protective negative regulator in autoimmune disorders. Biological active IDO enzyme can be used for screening of IDO inhibitors, which have shown promising antitumor activity and appear to be synergistic in combination with chemotherapy and other forms of immunotherapy.

Molecular Weight: ~47kDa (SDS-PAGE)

UniProt: [P14902](#)

Pathways: [Activated T Cell Proliferation](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Comment: Specific Activity: >100'000U/mg protein with L-tryptophan as substrate (activity assay with catalase). One unit is defined as the amount of enzyme that produces 1nmol of N-formylkynurenine (NFK) per hour. For more information see Activity Test Protocol.

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: Lot specific

Buffer: 0.2µm-filtered solution in 10 mM Tris, pH 7.5, containing 100 mM NaCl and 20 % glycerol.

Storage: -20 °C, -80 °C

Handling

Storage Comment: Short Term Storage: -20°C
 Long Term Storage: -80°C
 Stable for at least 1 year after receipt when stored at -80°C.

Expiry Date: 12 months