

# Recombinant Human IDO1/IDO Protein (Gly&Ala2-Gly403)



Catalog Number:PKSH030356

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

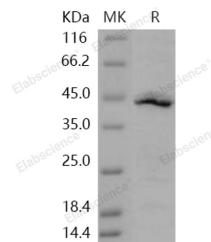
## Description

<b>Synonyms</b>	Indole 2,3-dioxygenase;Indoleamine 2,3-dioxygenase 1;IDO-1;IDO1;IDO;INDO
<b>Species</b>	Human
<b>Expression Host</b>	E.coli
<b>Sequence</b>	Ala 2-Gly 403
<b>Accession</b>	P14902-1
<b>Calculated Molecular Weight</b>	46.0 kDa
<b>Observed molecular weight</b>	44 kDa
<b>Tag</b>	N-His
<b>Bioactivity</b>	Measured by its ability to oxidize L-tryptophan to N-formylkynurenine. The specific activity is > 400 pmoles/min/μg.

## Properties

<b>Purity</b>	> 88 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	Please contact us for more information.
<b>Storage</b>	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
<b>Shipping</b>	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.
<b>Formulation</b>	Supplied as sterile solution of 50mM Tris, 0.15M NaCl, 10% glycerol, pH 8.0
<b>Reconstitution</b>	Not Applicable

## Data



> 88 % as determined by reducing SDS-PAGE.

## 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 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-

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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.

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