

Rabbit anti-Human, Rat INDO Polyclonal Antibody | anti-INDO antibody

INDO Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326269	Rabbit	Human, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

INDO; Polyclonal Antibody; INDO Antibody; 3-dioxygenase; I23O1_HUMAN; IDO 1; IDO; IDO-1; IDO1; indolamine 2; 3 dioxygenase; Indole 2 3 dioxygenase; indoleamine 2 3 dioxygenase 1; indoleamine 2 3 dioxygenase; Indoleamine 2; 3-dioxygenase 1; Indoleamine pyrrole 2 3 dioxygenase; Indoleamine-pyrrole 2; anti-INDO antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	INDO antibody detects endogenous levels of total INDO
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	403
Applicable Applications for anti-INDO antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human INDO
Subcellular Location	Cytosol
Tissue Specificity	Expressed in mature dendritic cells located in lymphoid organs (including lymph nodes, spleen, tonsils, Peyer's patches, the gut lamina propria, and the thymic medulla), in some epithelial cells of the female genital tract, as well as in endothelial cells of term placenta and in lung parenchyma (PubMed:25691885). Weakly or not expressed in most normal tissues, but mostly inducible in most tissues (PubMed:25691885). Expressed in more than 50% of tumors, either by tumoral, stromal, or endothelial cells (expression in tumor is associated with a worse clinical outcome) (PubMed:18418598). Not overexpressed in tumor-draining lymph nodes (PubMed:26155395, PubMed:25691885).
Predicted Cross Reactivity	Pig, Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog
Similarity	Pig (100%), Zebrafish (89%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

AAA326269 staining HepG2 cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.



WB (Western Blot)

Western blot analysis of extracts of Placenta, using INDO antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326269 at 1/100 staining Rat colon tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-INDO antibody

Description: INDO/IDO1/indoleamine 2, 3-dioxygenase (IDO) is an IFN-gamma-inducible enzyme that catalyzes the rate-limiting step of tryptophan degradation (1). IDO is upregulated in many tumors and in dendritic cells in tumor-draining lymph nodes. Elevated tryptophan catabolism in these cells leads to tryptophan starvation of T cells, limiting T cell proliferation and activation (2). Therefore, IDO is considered an immunosuppressive molecule, and research studies have shown that upregulation of IDO is a mechanism of cancer immune evasion (3). The gastrointestinal stromal tumor drug, imatinib, was found to act, in part, by reducing IDO expression, resulting in increased CD8+ T cell activation and induction of apoptosis in regulatory T cells (4). In addition to its enzymatic activity, IDO was recently shown to have signaling capability through an immunoreceptor tyrosine-based inhibitory motif (ITIM) that is phosphorylated by Fyn in response to TGF-beta. This leads to recruitment of SHP-1 and activation of the noncanonical NF-kappaB pathway (5).

Function: Catalyzes the first and rate limiting step of the catabolism of the essential amino acid tryptophan along the kynurenine pathway (PubMed:17671174). Involved in the peripheral immune tolerance, contributing to maintain homeostasis by preventing autoimmunity or immunopathology that would result from uncontrolled and overreacting immune responses (PubMed:25691885). Tryptophan shortage inhibits T lymphocytes division and accumulation of tryptophan catabolites induces T-cell apoptosis and differentiation of regulatory T-cells (PubMed:25691885). Acts as a suppressor of anti-tumor immunity (PubMed:23103127, PubMed:25157255, PubMed:14502282, PubMed:25691885). Limits the growth of intracellular pathogens by depriving tryptophan (PubMed:25691885). Protects the fetus from maternal immune rejection (PubMed:25691885).

Subunit Structure: Monomer.

Similarity: Belongs to the indoleamine 2, 3-dioxygenase family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4504577
NCBI GeneID	3620
NCBI Accession #	NP_002155.1
NCBI GenBank Nucleotide #	NM_002164.5
UniProt Accession #	P14902; Q540B4; E5RGR8; F6M9T7
Molecular Weight	Observed: 45 kDa Predicted: 46 kDa
NCBI Official Full Name	indoleamine 2,3-dioxygenase 1
NCBI Official Synonym Full Names	indoleamine 2,3-dioxygenase 1

NCBI Official Symbol	IDO1
NCBI Official Synonym Symbols	IDO; INDO; IDO-1
NCBI Protein Information	indoleamine 2,3-dioxygenase 1
UniProt Protein Name	Indoleamine 2,3-dioxygenase 1
UniProt Gene Name	IDO1
UniProt Synonym Gene Names	IDO; INDO; IDO-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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