Revision 8

Store at -20C

#86630

IDO (D5J4E) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-Bond, IHC-P, IF-IC, FC-FP	H	Endogenous	43	Rabbit IgG	#P14902	3620

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
IHC Leica Bond	1:200 - 1:800
Immunohistochemistry (Paraffin)	1:200 - 1:800
Immunofluorescence (Immunocytochemistry)	1:100 - 1:400
Flow Cytometry (Fixed/Permeabilized)	1:400 - 1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #91473.

Specificity/Sensitivity

IDO (D5J4E™) Rabbit mAb recognizes endogenous levels of total IDO (IDO-1, INDO) protein. The antibody does not cross-react with IDO-2 (INDOL1). Some nonspecific staining of normal breast epithelium has been observed.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant human IDO protein.

Background

INDO/IDO1/indoleamine 2,3-dioxygenase (IDO) is an IFN-γ-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 immunosuppresive 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-β. This leads to recruitment of SHP-1 and activation of the noncanonical NF-κB pathway (5).

Background References

1. Yasui, H. et al. (1986) *Proc Natl Acad Sci U S A* 83, 6622-6.
2. Mellor, A.L. et al. (2003) *Adv Exp Med Biol* 527, 27-35.
3. Prendergast, G.C. (2008) *Oncogene* 27, 3889-900.
4. Balachandran, V.P. et al. (2011) *Nat Med* 17, 1094-100.
5. Pallotta, M.T. et al. (2011) *Nat Immunol* 12, 870-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human

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