#12006 Store at -20°C

IDO Antibody

☑ 100 µl
(10 western blots)

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New 11/12

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #3620
Swiss-Prot Acc. #P14902

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP	H	43 kDa	Rabbit**
Endogenous			

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 activatation of the noncanonical NF-κB pathway (5).

Specificity/Sensitivity: IDO Antibody recognizes endogenous levels of total IDO protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human IDO protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

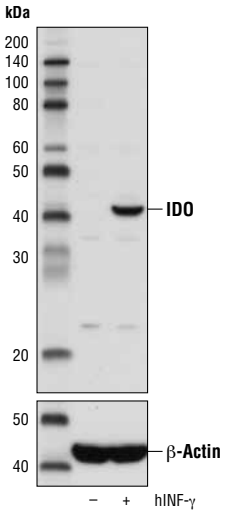
(1) Yasui, H. et al. (1986) *Proc. Natl. Acad. Sci. USA* 83, 6622–6626.

(2) Mellor, A.L. et al. (2003) *Adv. Exp. Med. Biol.* 527, 27-35.

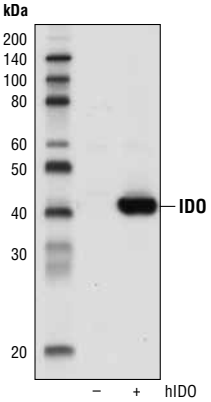
(3) Prendergast, G.C. (2008) *Oncogene* 27, 3889–3900.

(4) Balachandran, V.P. et al. (2011) *Nat. Med.* 17, 1094–1100.

(5) Pallotta, M.T. et al. (2011) *Nat. Immunol.* 12, 870–878.



Western blot analysis of extracts from HeLa cells, untreated (-) or treated; + with Human Interferon-γ (hIFN-γ) #8901 (10 ng/ml, 16 hr; +), using IDO Antibody (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower).



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a construct expressing full-length human IDO (hIDO; +), using IDO Antibody.

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

***Species cross-reactivity is determined by western blot.**

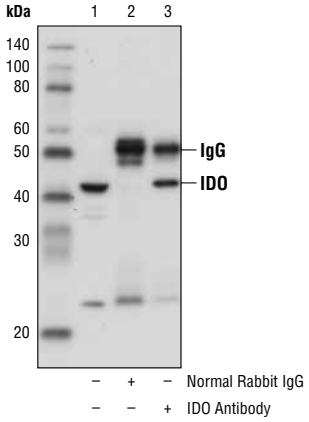
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.



Immunoprecipitation of IDO from HeLa cells, treated with Human Interferon-γ (hIFN-γ) #8901 (10 ng/ml, 16 hr), using Normal Rabbit IgG #2729 (lane 2) or IDO Antibody (lane 3). Lane 1 is 10% input. Western blot analysis was performed using IDO Antibody.

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

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.