

#68572 Store at -20°C

## IDO (D7Z7U) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, FC-FP	M	Endogenous	43	Rabbit IgG	#P28776	15930

## Product Usage Information

## Application

Western Blotting  
Immunoprecipitation  
Flow Cytometry (Fixed/Permeabilized)

## Dilution

1:1000  
1:100  
1:100

## 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.

## Specificity / Sensitivity

IDO (D7Z7U) Rabbit mAb recognizes endogenous levels of total IDO protein. This antibody does not cross-react with mouse IDO2.

## Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant mouse 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 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<sup>+</sup> 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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

## Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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