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IDO (D5J4E™) Rabbit mAb (PE Conjugate)



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

Applications: FC-FP	Reactivity: H	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P14902	Entrez-Gene Id: 3620
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.	
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.	
Product Description	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated IDO (D5J4E™) Rabbit mAb #86630.	
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+ 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	<ol style="list-style-type: none"> 1. Yasui, H. et al. (1986) <i>Proc Natl Acad Sci U S A</i> 83, 6622-6. 2. Mellor, A.L. et al. (2003) <i>Adv Exp Med Biol</i> 527, 27-35. 3. Prendergast, G.C. (2008) <i>Oncogene</i> 27, 3889-900. 4. Balachandran, V.P. et al. (2011) <i>Nat Med</i> 17, 1094-100. 5. Pallotta, M.T. et al. (2011) <i>Nat Immunol</i> 12, 870-8. 	

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