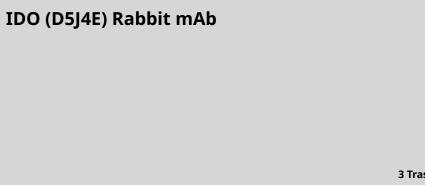
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Applications: W, IP, IHC-Bond, IHC-P, IF-IC, FC-FP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 43	Source/Isotype: Rabbit IgG	UniProt ID: #P14902	Entrez-Gene Id: 3620
Product Usage Information		Application Western Blotting Immunoprecipitation IHC Leica Bond Immunohistochemistr Immunofluorescence (Flow Cytometry (Fixed)	(Immunocytochemi	stry)	1:200 1:100	00
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) <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 Reactiv	vity	Species reactivity is de	termined by testing	in at least one approve	d 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.				n 5% w/v nonfat
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				
Trademarks and Patents		Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.				
		Alexa Fluor is a registe	red trademark of Li	fe Technologies Corpor	ation.	

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