Human Indoleamine 2,3-dioxygenase/IDO Antibody

Monoclonal Mouse IgG_1 Clone # 700838

Catalog Number: MAB6030

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Indoleamine 2,3-dioxygenase/IDO in direct ELISA.
Source	Monoclonal Mouse IgG_1 Clone # 700838
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Indoleamine 2,3-dioxygenase/IDO Ala2-Gly403 Accession # P14902
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

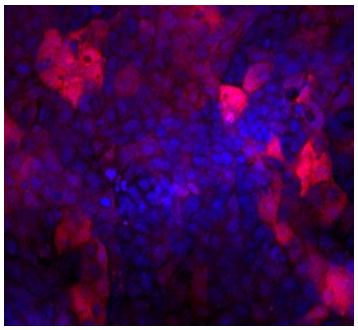
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	See Below
Intracellular Staining by Flow Cytometry	2.5 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

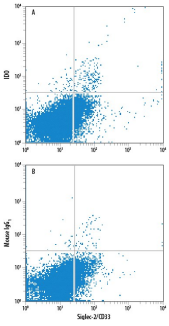
DATA

Immunocytochemistry



Indoleamine 2,3-dioxygenase/IDO in A431 Human Cell Line. Indoleamine 2,3-dioxygenase/IDO was detected in immersion fixed A431 human epithelial carcinoma cells stimulated with 0.5 ng/mL of Recombinant Human IFN-gamma (Catalog # 285-IF) using Mouse Anti-Human Indoleamine 2,3-dioxygenase/IDO Monoclonal Antibody (Catalog # MAB6030) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Intracellular Staining by Flow Cytometry



Detection of Indoleamine 2,3-dioxygenase/IDO in Human MDSCs by Flow Cytometry. Human PBMC-derived myeloid-derived suppressor cells (MDSCs) treated with 10 ng/mL Recombinant Human IL-6 (Catalog # 206-IL) and 10 ng/mL Recombinant Human GM-CSF (Catalog # 215-GM) for 7 days were stained with Mouse Anti-Human Siglec-3/CD33 APC-conjugated Monoclonal Antibody (Catalog # FAB1137A) and either (A) Mouse Anti-Human Indoleamine 2,3-dioxygenase/IDO Monoclonal Antibody (Catalog # MAB6030) or (B) Mouse IgG_1 Isotype Control (Catalog # MAB002) followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Indoleamine 2,3-dioxygenase (IDO) is a heme-containing intracellular dioxygenase catalyzing the degradation of the essential amino acid L-tryptophan to N-formyl-kynurenine (1). This degradation is the first and rate-limiting step of the L-kynurenine pathway (2). IDO is widely expressed in dendritic cells, macrophages, microglia, eosinophils, fibroblasts, endothelial cells, and most tumor cells. In immune cells, its expression is mainly induced by cytokines such as IFN-γ, IFN-α, IFN-β, and IL-10. IDO has an antimicrobial function due to its decreasing the availability of the essential amino acid tryptophan in inflammatory environments (3). Recent studies have demonstrated that IDO induces immunosuppression during infection, pregnancy, transplantation, autoimmunity, and neoplasia (3-5).

References:

1. Lewis-Ballester, A. *et al.* (2009) Proc. Natl. Acad. Sci. USA. **106**:17371.
2. Costantino, G. (2009) Expert Opin. Ther. Targets **13**:247.
3. Xu, H. *et al.* (2008) Immunol. Lett. **121**:1.
4. Lob, S. *et al.* (2009) Nat. Rev. Cancer **9**:445.
5. Curti, A. *et al.* (2009) Blood **113**:2394.

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