

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	<i>E. coli</i> -derived recombinant human Indoleamine 2,3-dioxygenase/IDO Ala2-Gly403 Accession # P14902
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

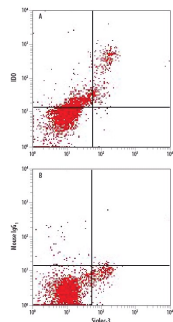
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	10 µL/10 ⁶ cells	See Below

DATA

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-L) and 10 ng/mL Recombinant Human GM-CSF (Catalog # 215-GM) for 7 days were stained with Mouse Anti-Human Siglec-3/CD33 PE-conjugated Monoclonal Antibody (Catalog # FAB1137P) and either (A) Mouse Anti-Human Indoleamine 2,3-dioxygenase/IDO APC-conjugated Monoclonal Antibody (Catalog # IC6030A) or (B) Mouse IgG₁ Allophycocyanin Isotype Control (Catalog # IC002A). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for [Staining Intracellular Molecules](#).

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

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:

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