

Human Arginase 1/ARG1 PE-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 658922

Catalog Number: IC8026P

100 TESTS

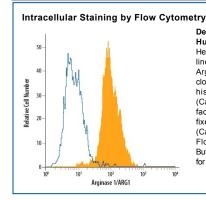
DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human Arginase 1/ARG1 in ELISAs.		
Source	Monoclonal Mouse IgG _{2B} Clone # 658922		
Purification	Protein A or G purified from hybridoma culture supernatant		
Immunogen	E. coli-derived recombinant human Arginase 1/ARG1 Met1-Lys322 Accession # P05089		
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 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



Detection of Arginase 1/ARG1 in HepG2 Human Cell Line by Flow Cytometry. HepG2 human hepatocellular carcinoma cell line was stained with Mouse Anti-Human Arginase 1/ARG1 PE-conjugated Monoclonal Antibody (Catalog # IC8026P, filled histogram) or isotype control antibody (Catalog # IC0041P, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilizate 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.

• 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Arginase 1 (ARG1) is a 35–40 kDa member of the arginase family of enzymes. It is expressed in multiple cell types, including erythrocytes, hepatocytes, neutrophils, smooth muscle and macrophages. ARG1 demonstrates two distinct functions: in the hepatocyte cytoplasm, it catalyzes the conversion of arginine to ornithine and urea, while in multiple cells, it degrades arginine, thus indirectly downregulating NO synthase (NOS) activity by depriving this enzyme of its substrate. Human ARG1 is 322 amino acids (aa) in length. Its enzyme region comprises aa 9–309 and contains two Mn atoms. ARG1 is moderately active as a monomer, but highly active as a 105 kDa homotrimer. Trimerization is promoted by nitrosylation of Cys303, creating a regulatory feedback loop with NOS. There are two isoform variants, one that shows an eight aa insertion after Gln43, and another that shows a deletion of aa 204–289. Full-length human ARG1 shares 87% aa identity with mouse and rat ARG1.

