

DESCRIPTION

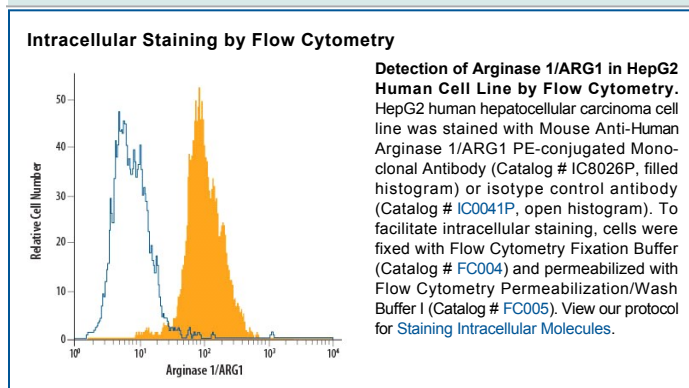
Species Reactivity	Human
Specificity	Detects human Arginase 1/ARG1 in ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 658922
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Arginase 1/ARG1 Met1-Lys322 Accession # P05089
Conjugate	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



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

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.