

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Arginase 1/ARG1 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 658934
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	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

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.

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