

Human/Mouse/Rat Arginase 1/ARG1 Antibody

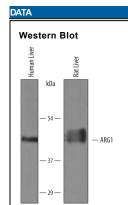
Antigen Affinity-purified Polyclonal Sheep IgG Catalog Number: AF5868

DESCRIPTION		
Species Reactivity	Human/Mouse/Rat	
Specificity	Detects human, mouse, and rat Arginase 1/ARG1 in direct ELISAs and Western blots.	
Source	Polyclonal Sheep IgG	
Purification	Antigen Affinity-purified	
Immunogen	E. coli-derived recombinant human Arginase 1/ARG1 Met1-Lys322 Accession # P05089	
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 either lyophilized or as a 0.2 μm filtered solution in PBS.	

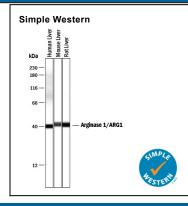
APPLICATIONS

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
Western Blot	0.25 μg/mL	See Below
Immunoprecipitation	25 μg/mL	Cell lysates spiked with Recombinant Human Arginase 1/ARG1 (Catalog # 5868-AR), see our available Western blot detection antibodies
Simple Western	2.5 μg/mL	See Below



Detection of Human and Rat Arginase 1/ARG1 by Western Blot. Western blot shows lysates of human liver tissue and rat liver tissue. PVDF membrane was probed with 0.25 µg/mL of Sheep Anti-Human/Mouse/Rat Arginase 1/ARG1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5868) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Arginase 1/ARG1 at approximately 41 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.



Detection of Human, Mouse, and Rat Arginase 1/ARG1 by Simple WesternTM. Simple Western lane view shows lysates of human liver tissue, mouse liver tissue, and rat liver tissue, loaded at 0.2 mg/mL. A specific band was detected for Arginase 1/ARG1 at approximately 41 kDa (as indicated) using 2.5 µg/mL of Sheep Anti-Human/Mouse/Rat Arginase 1/ARG1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5868) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.2 mg/mL in sterile PBS

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

- 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

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 AGR1 is 322 amino acids (aa) in length. Its enzyme region comprises aa 9-309 and contains two Mn atoms. ARG1 is modestly 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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