**DESCRIPTION**

**Species Reactivity**  
Human

**Specificity**  
Detects human Arginase 1/ARG1 in ELISAs.

**Source**  
Monoclonal Mouse IgG2B, 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

**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.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
<th>Flow Cytometry</th>
<th>CyTOF-reported</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2.5 μg/10⁶ cells</td>
<td>See Below</td>
</tr>
</tbody>
</table>

**DATA**

Detection of Arginase 1/ARG1 in HepG2 human hepatocellular carcinoma cell line by Flow Cytometry.  
HepG2 human hepatocellular carcinoma cell line was stained with Mouse Anti-Human Arginase 1/ARG1 Monoclonal Antibody (Catalog # MAB58681, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B).

**PREPARATION AND STORAGE**

<table>
<thead>
<tr>
<th>Reconstitution</th>
<th>Sterile PBS to a final concentration of 0.5 mg/mL.</th>
</tr>
</thead>
</table>
| 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. |

**Stability & Storage**  
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.  
- 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 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.