Arginase-1 Antibody

#9819

Store at -20°C

For Research Use Only. Not for Use in Diagnostic Procedures.

<table>
<thead>
<tr>
<th>Applications:</th>
<th>Reactivity:</th>
<th>Sensitivity:</th>
<th>MW (kDa):</th>
<th>Source:</th>
<th>UniProt ID:</th>
<th>Entrez-Gene Id:</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>H M R</td>
<td>Endogenous</td>
<td>40</td>
<td>Rabbit</td>
<td>#P05089</td>
<td>383</td>
</tr>
</tbody>
</table>

**Product Usage Information**

**Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μg/ml BSA and 50% glycerol. Store at −20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

Arginase-1 Antibody recognizes endogenous levels of total arginase-1 protein.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val47 of human arginase-1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

L-arginine plays a critical role in regulating the immune system (1-3). In inflammation, cancer, and certain other pathological conditions, myeloid cell differentiation is inhibited leading to a heterogeneous population of immature myeloid cells, known as myeloid-derived suppressor cells (MDSCs). MDSCs are recruited to sites of cancer-associated inflammation and express high levels of arginase-1 (4). Arginase-1 catalyzes the final step of the urea cycle converting L-arginine to L-ornithine and urea (5). Thus, MDSCs increase the catabolism of L-arginine resulting in L-arginine depletion in the inflammatory microenvironment of cancer (4,6). The reduced availability of L-arginine suppresses T cell proliferation and function and thus contributes to tumor progression (4,6). Arginase-1 is of great interest to researchers looking for a therapeutic target to inhibit the function of MDSCs in the context of cancer immunotherapy (7). In addition, research studies have demonstrated that arginase-1 distinguishes primary hepatocellular carcinoma (HCC) from metastatic tumors in the liver, indicating its value as a potential biomarker in the diagnosis of HCC (8,9).

**Background References**


**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

WB: Western Blotting

**Cross-Reactivity Key**


**Trademarks and Patents**

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

**Limited Uses**
Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer’s terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.

Orders: 877-616-CELL (2355)  •  orders@cellsignal.com  •  Support: 877-678-TECH (8324)  •  info@cellsignal.com  •  Web: cellsignal.com
For Research Use Only. Not for Use in Diagnostic Procedures.