

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human SAMHD1 in ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 883335
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human SAMHD1 His206-Arg339 Accession # Q9Y3Z3
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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
<b>Western Blot</b>	1 µg/mL	See Below
<b>Simple Western</b>	10 µg/mL	See Below

**DATA**

<p><b>Western Blot</b></p>	<p><b>Detection of Human SAMHD1 by Western Blot.</b> Western blot shows lysates of Daudi human Burkitt's lymphoma cell line and HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human SAMHD1 Monoclonal Antibody (Catalog # MAB8120) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for SAMHD1 at approximately 72 kDa (as indicated). This experiment was conducted under reducing conditions and using Immoblot Buffer Group 1.</p>	<p><b>Simple Western</b></p>	<p><b>Detection of Human SAMHD1 by Simple Western™.</b> Simple Western lane view shows lysates of Daudi human Burkitt's lymphoma cell line, loaded at 0.5 mg/mL. A specific band was detected for SAMHD1 at approximately 70 kDa (as indicated) using 10 µg/mL of Mouse Anti-Human SAMHD1 Monoclonal Antibody (Catalog # MAB8120). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p>
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**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Human SAM (Sterile Alpha Motif) domain and HD (His/Asp motif-containing phosphohydrolase) domain-containing 1 (SAMHD1), also known as DCIP (dendritic cell IFN-g-induced protein) or MOP5 (monocyte protein 5) is a 70-80 kDa, 626 amino acid (aa) nuclear protein that acts as a dGTP-regulated deoxynucleotide triphosphohydrolase. It restricts HIV replication by binding nucleic acids. SAMHD-1 expression is induced by TNF-α in myeloid lineage cells and lung fibroblasts. Human SAMHD1 mutations are linked to Aicardi-Goutieres Syndrome, which is characterized by symptoms mimicking viral infection. Human SAMHD1 isoforms of 602, 591, and 556 aa lack aa 113-136, 502-536, and 285-354, respectively. The 591 and 556 aa forms are catalytically inactive. Within the region used as an immunogen, human SAMHD1 shares 85% aa sequence identity with mouse and rat SAMHD1.