

Mouse anti-Human SAMHD1 Monoclonal Antibody | anti-SAMHD1 antibody

Anti-SAMHD1 Antibody (monoclonal, 3B9)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19355	Mouse	Human	Western Blot, Immunohistochemistry, Immunocytochemistry, Immunofluorescence, Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

SAMHD1; Monoclonal Antibody; Anti-SAMHD1 Antibody (monoclonal; 3B9); MOP5; Deoxynucleoside triphosphate triphosphohydrolase SAMHD1; dNTPase; EC 3. 1. 5. -; Dendritic cell-derived IFNG-induced protein; DCIP; Monocyte protein 5; MOP-5; SAM domain and HD domain-containing protein 1; hSAMHD1; SAM and HD domain containing deoxynucleoside triphosphate triphosphohydrolase 1; anti-SAMHD1 antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Number	3B9
Specificity	Mouse IgG monoclonal antibody for SAMHD1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Applicable Applications for anti-SAMHD1 antibody	WB (Western Blot), IHC (Immunohistochemistry), ICC (Immunocytochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry)
Application Notes	WB: 0.25-0.5ug/ml Human IHC-P: 2-5ug/ml Human ICC/IF: 5ug/ml Human FC/FACS/FCM: 1-3ug/1x106 cells Human
Immunogen	E Coli-derived human SAMHD1 recombinant protein (Position: E37-M626).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



FCM (Flow Cytometry)

Figure 11. Flow Cytometry analysis of A431 cells using anti-SAMHD1 antibody (AAA19355). Overlay histogram showing A431 cells stained with AAA19355 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-SAMHD1 Antibody (AAA19355, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IF (Immunofluorescence)

Figure 10. IF analysis of SAMHD1 using anti-SAMHD1 antibody (AAA19355). SAMHD1 was detected in immunocytochemical section of CACO-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5μg/mL mouse anti-SAMHD1 Antibody (AAA19355) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IHC (Immunohistochemistry)

Figure 9. IHC analysis of SAMHD1 using anti-SAMHD1 antibody (AAA19355). SAMHD1 was detected in paraffin-embedded section of human ovarian serous adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml mouse anti-SAMHD1 Antibody (AAA19355) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



IHC (Immunohistochemistry)

Figure 8. IHC analysis of SAMHD1 using anti-SAMHD1 antibody (AAA19355). SAMHD1 was detected in paraffin-embedded section of human lymphoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml mouse anti-SAMHD1 Antibody (AAA19355) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



IHC (Immunohistochemistry)

Figure 7. IHC analysis of SAMHD1 using anti-SAMHD1 antibody (AAA19355). SAMHD1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml mouse anti-SAMHD1 Antibody (AAA19355) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



IHC (Immunohistochemistry)

Figure 6. IHC analysis of SAMHD1 using anti-SAMHD1 antibody (AAA19355). SAMHD1 was detected in paraffin-embedded section of human gallbladder adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml mouse anti-SAMHD1 Antibody (AAA19355) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).

ADDITIONAL INFORMATION

Related Product Information for anti-SAMHD1 antibody	SAM domain and HD domain-containing protein 1 is a protein that in humans is encoded by the SAMHD1 gene. This gene may play a role in regulation of the innate immune response. The encoded protein is upregulated in response to viral infection and may be involved in mediation of tumor necrosis factor-alpha proinflammatory responses. Mutations in this gene have been associated with Aicardi-Goutieres syndrome.
References	- Behrendt, R., Schumann, T., Gerbaulet, A., Nguyen, L. A., Schubert, N., Alexopoulos, D., Berka, U., Lienenklaus, S., Peschke, K., Gibbert, K., Wittmann, S., Lindemann, D., Weiss, S., Dahl, A., Naumann, R., Dittmer, U., Kim, B., Mueller, W., Gramberg, T., Roers, A. Mouse SAMHD1 has antiretroviral activity and suppresses a spontaneous cell-intrinsic antiviral response. Cell Rep. 4: 689-696, 2013. - Coquel, F., Silva, M. -J., Techer, H., Zadorozhny, K., Sharma, S., Nieminszczy, J., Mettling, C., Dardillac, E., Barthe, A., Schmitz, A. -L., Promonet, A., Cribier, A., and 9 others. SAMHD1 acts at stalled replication forks to prevent interferon induction. Nature 557: 57-61, 2018. - Crow, Y. J., Chase, D. S., Lowenstein Schmidt, J., Szykiewicz, M., Forte, G. M. A., Gornall, H. L., Oojageer, A., Anderson, B., Pizzino, A., Helman, G., Abdel-Hamid, M. S., Abdel-Salam, G. M., and 124 others. Characterization of human disease phenotypes associated with mutations in TREX1, RNASEH2A, RNASEH2B, RNASEH2C, SAMHD1, ADAR, and IFIH1. Am. J. Med. Genet. 167A: 296-312, 2015.

NCBI AND UNIPROT INFORMATION

NCBI GI #	38016914
NCBI GeneID	25939
NCBI Accession #	NP_056289
NCBI GenBank Nucleotide #	NM_015474.3
UniProt Accession #	Q9Y3Z3; Q5JXG8; Q8N491; Q9H004; Q9H005; Q9H3U9; B4E2A5; E1P5V2
Molecular Weight	Predicted: 65; 69 kDa Observed: 62 kDa
NCBI Official Full Name	deoxynucleoside triphosphate triphosphohydrolase SAMHD1
NCBI Official Synonym Full Names	SAM domain and HD domain 1
NCBI Official Symbol	SAMHD1
NCBI Official Synonym Symbols	DCIP; CHBL2; HDDC1; MOP-5; SBB188
NCBI Protein Information	deoxynucleoside triphosphate triphosphohydrolase SAMHD1; dNTPase; monocyte protein 5; dendritic cell-derived IFNG-induced protein; SAM domain and HD domain-containing protein 1
UniProt Protein Name	Deoxynucleoside triphosphate triphosphohydrolase SAMHD1
UniProt Gene Name	SAMHD1
UniProt Synonym Gene Names	MOP5; dNTPase; DCIP; MOP-5
UniProt Entry Name	SAMH1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/monoclonal/samhd1-antibody-clone-3b9-western-blot-immunohistochemistry-immunocytochemistry-immunofluorescence-flow-cytometry-elisa/19355>