

SAMHD1 Rabbit mAb
Catalog # AP77867**Specification****SAMHD1 Rabbit mAb - Product Information**

Application	WB
Primary Accession	O9Y3Z3
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	72201

SAMHD1 Rabbit mAb - Additional Information

Gene ID 25939

Other Names
SAMHD1**Dilution**
WB~~1/500-1/1000**Format**
Liquid**SAMHD1 Rabbit mAb - Protein Information**Name SAMHD1 ([HGNC:15925](#))**Function**

Protein that acts both as a host restriction factor involved in defense response to virus and as a regulator of DNA end resection at stalled replication forks (PubMed:[19525956](http://www.uniprot.org/citations/19525956), PubMed:[21613998](http://www.uniprot.org/citations/21613998), PubMed:[21720370](http://www.uniprot.org/citations/21720370), PubMed:[22056990](http://www.uniprot.org/citations/22056990), PubMed:[23601106](http://www.uniprot.org/citations/23601106), PubMed:[23602554](http://www.uniprot.org/citations/23602554), PubMed:[24336198](http://www.uniprot.org/citations/24336198), PubMed:[26294762](http://www.uniprot.org/citations/26294762), PubMed:[26431200](http://www.uniprot.org/citations/26431200), PubMed:[28229507](http://www.uniprot.org/citations/28229507), PubMed:[28834754](http://www.uniprot.org/citations/28834754), PubMed:[29670289](http://www.uniprot.org/citations/29670289)). Has deoxynucleoside triphosphate (dNTPase) activity, which is required to restrict infection by viruses, such as HIV-1: dNTPase activity reduces cellular dNTP levels to levels too low for retroviral reverse transcription to occur, blocking early- stage virus replication in dendritic and other myeloid cells (PubMed:[19525956](http://www.uniprot.org/citations/19525956)),

PubMed: 21613998, PubMed: 21720370, PubMed: 22056990, PubMed: 23364794, PubMed: 23601106, PubMed: 23602554, PubMed: 24336198, PubMed: 25038827, PubMed: 26101257, PubMed: 26294762, PubMed: 26431200, PubMed: 28229507). Likewise, suppresses LINE-1 retrotransposon activity (PubMed: 24035396, PubMed: 24217394, PubMed: 29610582). Not able to restrict infection by HIV-2 virus; because restriction activity is counteracted by HIV-2 viral protein Vpx (PubMed: 21613998, PubMed: 21720370). In addition to virus restriction, dNTPase activity acts as a regulator of DNA precursor pools by regulating dNTP pools (PubMed: 23858451). Phosphorylation at Thr-592 acts as a switch to control dNTPase-dependent and -independent functions: it inhibits dNTPase activity and ability to restrict infection by viruses, while it promotes DNA end resection at stalled replication forks (PubMed: 23601106, PubMed: 23602554, PubMed: 29610582, PubMed: 29670289). Functions during S phase at stalled DNA replication forks to promote the resection of gapped or reversed forks: acts by stimulating the exonuclease activity of MRE11, activating the ATR-CHK1 pathway and allowing the forks to restart replication (PubMed: 29670289). Its ability to promote degradation of nascent DNA at stalled replication forks is required to prevent induction of type I interferons, thereby preventing chronic inflammation (PubMed: 27477283, PubMed: 29670289). Ability to promote DNA end resection at stalled replication forks is independent of dNTPase activity (PubMed: 29670289). Enhances immunoglobulin hypermutation in B-lymphocytes by promoting transversion mutation (By similarity).

Cellular Location

Nucleus. Chromosome Note=Localizes to sites of DNA double-strand breaks in response to DNA damage.

Tissue Location

Expressed in heart, skeletal muscle, spleen, liver, small intestine, placenta, lung and peripheral blood leukocytes (PubMed:11064105). No expression is seen in brain and thymus (PubMed:11064105).

SAMHD1 Rabbit mAb - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SAMHD1 Rabbit mAb - Images

