

SAMHD1 Antibody

✓ 100 µl
(10 western blots)

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 03/19/15

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #25939
Swiss-Prot Acc. #Q9Y3Z3

Applications W Endogenous	Species Cross-Reactivity* H	Molecular Wt. 69, 72 kDa	Source Rabbit**
---------------------------------	--------------------------------	-----------------------------	--------------------

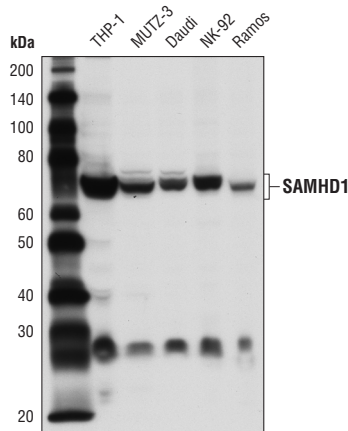
Background: SAM domain and HD domain-containing protein 1 (SAMHD1) is a negative regulator of the cell-intrinsic innate immune response (1). Research studies have identified mutations in *SAMHD1* as a cause of Aicardi-Goutieres syndrome, an autoimmune disease characterized by elevated production of interferon- α and symptoms resembling congenital viral infection (1). SAMHD1 was identified as the restriction factor that renders most myeloid cells refractory to human immunodeficiency virus (HIV) infection (2-4). Expression of the viral protein Vpx in refractory cells targets SAMHD1 for ubiquitin-mediated degradation and relieves HIV restriction. SAMHD1 prevents autoimmunity and HIV infection by hydrolyzing intracellular deoxynucleoside triphosphates (dNTPs), thereby limiting inappropriate immune activation by self nucleic acid and inhibiting reverse transcription of the HIV genome (4-6).

Specificity/Sensitivity: SAMHD1 Antibody recognizes endogenous levels of total SAMHD1 protein. This antibody cross-reacts with a 30 kDa protein of unknown origin.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro607 of human SAMHD1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Rice, G.I. et al. (2009) *Nat Genet* 41, 829-32.
- (2) Laguette, N. et al. (2011) *Nature* 474, 654-7.
- (3) Hrecka, K. et al. (2011) *Nature* 474, 658-61.
- (4) Powell, R.D. et al. (2011) *J Biol Chem* 286, 43596-600.
- (5) Goldstone, D.C. et al. (2011) *Nature* 480, 379-82.
- (6) Lahouassa, H. et al. (2012) *Nat Immunol* 13, 223-8.



Western blot analysis of extracts from various cell lines using SAMHD1 Antibody.

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

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