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Phospho-SAMHD1 (Thr592) (D7O2M) Rabbit mAb (PE Conjugate)

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

Applications: FC-FP	Reactivity: H M R	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q9Y3Z3	Entrez-Gene Id: 25939
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
Specificity/Sensitivity	Phospho-SAMHD1 (Thr592) (D7O2M) Rabbit mAb (PE Conjugate) recognizes endogenous levels of SAMHD1 protein only when phosphorylated at Thr592.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Thr592 of human SAMHD1 protein.	
Description	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometric analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-SAMHD1 (Thr592) (D7O2M) Rabbit mAb #89930.	
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 <i>SAMHD1</i> 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).	
Background References	<ol style="list-style-type: none"> 1. Rice, G.I. et al. (2009) <i>Nat Genet</i> 41, 829-32. 2. Laguette, N. et al. (2011) <i>Nature</i> 474, 654-7. 3. Hrecka, K. et al. (2011) <i>Nature</i> 474, 658-61. 4. Powell, R.D. et al. (2011) <i>J Biol Chem</i> 286, 43596-600. 5. Goldstone, D.C. et al. (2011) <i>Nature</i> 480, 379-82. 6. Lahouassa, H. et al. (2012) <i>Nat Immunol</i> 13, 223-8. 	
Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)	
Cross-Reactivity Key	H: Human M: Mouse R: Rat	
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