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CD45RO (UCHL1) Mouse mAb (Alexa Fluor® 700 Conjugate)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-L	H	Endogenous	Mouse IgG2a	#P08575	5788

Product Usage Information

Application	Dilution
Flow Cytometry (Live)	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

CD45RO (UCHL1) Mouse mAb (Alexa Fluor® 700 Conjugate) recognizes endogenous levels of total CD45RO protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with the IL-2-dependent T cell line, CA1 (5).

Product Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 700 fluorescent dye 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 CD45RO (UCHL1) Mouse mAb (IHC Specific) #55618.

Background

The protein phosphatase (PTP) receptor CD45 is a type I transmembrane protein comprised of a pair of intracellular tyrosine phosphatase domains and a variable extracellular domain generated by alternative splicing (1). The catalytic activity of CD45 is a function of the first phosphatase domain (D1) while the second phosphatase domain (D2) may interact with and stabilize the first domain, or recruit/bind substrates (2,3). CD45 interacts directly with antigen receptor complex proteins or activates Src family kinases involved in the regulation of T- and B-cell antigen receptor signaling (1). Specifically, CD45 dephosphorylates Src-family kinases Lck and Fyn at their conserved negative regulatory carboxy-terminal tyrosine residues and upregulates kinase activity. Conversely, studies indicate that CD45 can also inhibit Lck and Fyn by dephosphorylating their positive regulatory autophosphorylation site. CD45 appears to be both a positive and a negative regulator that conducts signals depending on specific stimuli and cell type (1). Human leukocytes including lymphocytes, eosinophils, monocytes, basophils, and neutrophils express CD45, while erythrocytes and platelets are negative for CD45 expression (4).

Background References

1. Huntington, N.D. and Tarlinton, D.M. (2004) *Immunol Lett* 94, 167-74.
2. Felberg, J. and Johnson, P. (2000) *Biochem Biophys Res Commun* 271, 292-8.
3. Kashio, N. et al. (1998) *J Biol Chem* 273, 33856-63.
4. Wang, Y. and Johnson, P. (2005) *J Biol Chem* 280, 14318-24.
5. Smith, S.H. et al. (1986) *Immunology* 58, 63-70.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-L: Flow Cytometry (Live)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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