Revision 1

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#66120

CD27 (O323) Mouse mAb (PE-Cy7® Conjugate)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP, FC-L	H	Endogenous	Mouse IgG1 kappa	#P26842	939

Product Usage Information

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	1:20
Flow Cytometry (Live)	1:20

Storage

Supplied in 10 mM NaH_2PO_4, 150 mM NaCl, 0.09% NaN_3, 0.1% gelatin, pH7.2. This product is stable for 6 months when stored at 4ºC. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

CD27 (O323) Mouse mAb (PE-Cy7® Conjugate) recognizes endogenous levels of total CD27 protein. This antibody detects an epitope within the extracellular domain.

Source / Purification

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation.

Description

This Cell Signaling Technology antibody is conjugated to PE-Cy7® and tested in-house for direct flow cytometric analysis in human cells.

Background

CD27 (TNFRSF7) is a transmembrane protein of the TNF receptor superfamily (TNFRSF). It is mainly expressed on lymphoid cells (also on early hematopoietic precursor cells in mice) (1,2). CD27 is considered a phenotypic marker for memory B cells and is also used to identify B regulatory (Breg) cells (3,4). It is constitutively expressed on naïve CD4 and CD8 T cells and its expression is further upregulated upon T cell activation. CD27 is one of the two most important co-stimulatory receptors for T cell priming (the other one is CD28). While CD28 co-stimulatory signal mainly triggers cell proliferation, CD27 co-stimulatory signal primarily promotes cell survival and differentiation (5,6). Upon binding to its ligand CD70, CD27 activates the NF-κB and JNK signaling pathways through TNFR associated factors (TRAFs), the adaptor molecules that are associated with CD27 cytoplasmic tail domain. Upon activation, CD27 is shed from the cell surface and soluble CD27 is used as a marker of T cell activation (7,8).

This O323 antibody is used for flow cytometric analysis of CD27 expression on various cell populations.

Background References

1. So, T. et al. (2006) *Int J Hematol* 83, 1-11.
2. Waight, J.D. et al. (2017) *Hum Antibodies* 25, 87-109.
3. Agematsu, K. (2000) *Histol Histopathol* 15, 573-6.
4. Bouaziz, J.D. et al. (2012) *Curr Mol Med* 12, 519-27.
5. Croft, M. *Cytokine Growth Factor Rev* 14, 265-73.
6. Acuto, O. and Michel, F. (2003) *Nat Rev Immunol* 3, 939-51.
7. Lens, S.M. et al. (1998) *Semin Immunol* 10, 491-9.
8. van de Ven, K. and Borst, J. (2015) *Immunotherapy* 7, 655-67.

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) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

H: Human

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Limited Uses

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