

Store at  
4°C

# CD127/IL-7R $\alpha$ (A7R34) Rat mAb (PE Conjugate)

#67948

Support: +1-978-867-2388 (U.S.)  
www.cellsignal.com/supportOrders: 877-616-2355 (U.S.)  
orders@cellsignal.comEntrez-Gene ID #16197  
UniProt ID #P16872

New 07/19

**For Research Use Only. Not For Use In Diagnostic Procedures.****Applications**  
F  
Endogenous**Species Cross-Reactivity**  
M**Isotype**  
Rat IgG2a

**Description:** This Cell Signaling Technology antibody is conjugated to PE and tested in-house for direct flow cytometric analysis in mouse cells.

**Background:** The IL-7 receptor (IL-7R) is comprised of two protein subunits, CD127/IL-7R $\alpha$  (IL-7R $\alpha$ ) and the common gamma chain (CD132), which is the major signaling component for several cytokines including IL-2, IL-4, IL-9, IL-15, and IL-21 (1). CD127/IL-7R $\alpha$  is a transmembrane protein belonging to the cytokine receptor homology class 1 (CRH1) and is expressed by a wide variety of cells including immature B cells, thymic natural killer cells, bone marrow stromal cells, and T cells (5-6). On its own, CD127/IL-7R $\alpha$  functions as a receptor for two cytokine receptor complex signaling cascades: IL-7 and thymic stromal lymphopoietin (TSLP) (2). IL-7 signaling contributes to T cell development and homeostasis whereas TSLP receptor signaling contributes to dendritic cell activation and B cell development. IL-7 signaling is an essential component in regulating the homeostasis of naive and memory T cells as differential expression of CD127/IL-7R $\alpha$  is observed on naive and activated T cells, which occurs following TCR activation. Specifically, CD127/IL-7R $\alpha$  expression is downregulated on activated T cells and the subsequent re-expression of CD127/IL-7R $\alpha$  on these cells is indicative of cells that will differentiate into memory T cells (3-4).

The A7R34 antibody is widely used to identify CD127/IL-7R $\alpha$  expression on both B and T cells (6).

**Specificity/Sensitivity:** CD127/IL-7R $\alpha$  (A7R34) Rat mAb (PE Conjugate) recognizes endogenous levels of total CD127/IL-7R $\alpha$  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.

**Storage:** Supplied in 10 mM NaH<sub>2</sub>PO<sub>4</sub>, 150 mM NaCl, 0.09% NaN<sub>3</sub>, 0.1% gelatin, pH 7.2. This product is stable for 6 months when stored at 4°C. *Do not aliquot the antibody. Protect from light. Do not freeze.*

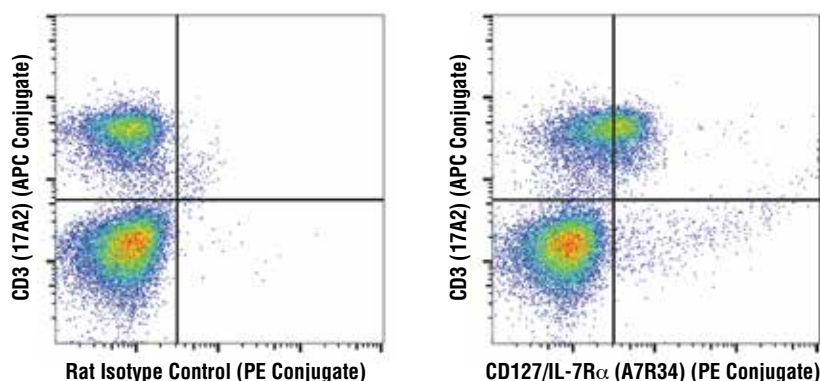
**Recommended Antibody Dilutions:**

Flow Cytometry 1:80

**For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).**

**Background References:**

- (1) Rochman, Y. et al. (2009) *Nat Rev Immunol* 9, 480-90.
- (2) Levin, S.D. et al. (1999) *J Immunol* 162, 677-83.
- (3) Schluns, K.S. et al. (2000) *Nat Immunol* 1, 426-32.
- (4) Rochman, Y. and Leonard, W.J. (2008) *J Immunol* 181, 7699-705.
- (5) McElroy, C.A. et al. (2012) *Proc Natl Acad Sci U S A* 109, 2503-8.
- (6) Sudo, T. et al. (1993) *Proc Natl Acad Sci U S A* 90, 9125-9.



Flow cytometric analysis of live mouse splenocytes using CD127/IL-7R $\alpha$  (A7R34) Rat mAb (PE Conjugate) and co-stained with CD3 (17A2) Rat mAb (APC Conjugate) #24265 (right), compared to concentration-matched Rat Isotype Control (PE Conjugate) (left).

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**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.