

#28470 Store at +4C

CD127/IL-7R α (A7R34) Rat mAb (APC Conjugate)**Cell Signaling**
TECHNOLOGY®**Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications: FC-L	Reactivity: M	Sensitivity: Endogenous	Source/Isotype: Rat IgG2a kappa	UniProt ID: #P16872	Entrez-Gene Id: 16197
------------------------------	-------------------------	-----------------------------------	-------------------------------------------	-------------------------------	---------------------------------

Product Usage InformationFor optimal flow cytometry results, we recommend 0.25 μ g of antibody per test.

Application	Dilution
Flow Cytometry (Live)	1:80

StorageSupplied in 10 mM NaH₂PO₄, 150 mM NaCl, 0.09% NaN₃, 0.1% gelatin, pH 7.2. This product is stable for 12 months when stored at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.**Specificity / Sensitivity**CD127/IL-7R α (A7R34) Rat mAb (APC Conjugate) recognizes endogenous levels of total CD127/IL-7R α 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.

Product Description

This Cell Signaling Technology antibody is conjugated to APC 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 α (IL-7R α) 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 α 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 α 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 α is observed on naive and activated T cells, which occurs following TCR activation. Specifically, CD127/IL-7R α expression is downregulated on activated T cells and the subsequent re-expression of CD127/IL-7R α 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 α expression on both B and T cells (6).**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.

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**Trademarks and Patents**

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.