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Datasheet for 600-401-A49

IL-7 Receptor Alpha Chain phospho Y449 Antibody

Overview

Description:	Anti-IL-7 Receptor alpha chain pY449 (RABBIT) Antibody - 600-401-A49
Item No.:	600-401-A49
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. Interleukin-7 is a glycoprotein involved in the regulation of lymphopoiesis. Response of cells to IL7 is dependent on the presence of the interleukin 7 receptor (IL7R); the active receptor is an alpha/gamma chain heterodimer. The gamma(c) chain, which also associates with the interleukin-2 receptor, serves primarily to activate signal transduction by the IL7R complex, while the alpha chain of IL7R determines specific signaling events through its association with cytoplasmic signaling molecules. The human and mouse sequence is nearly identical. In humans, severe combined immunodeficiency is caused by genetic defects in IL-7 receptor. The tyrosine residue at the 449 position is a critical signaling site of the intracellular domain of IL-7 receptor. This site is rapidly phosphorylated by janus kinases after the IL-7 receptor is engaged. IL-7 Receptor Alpha Chain phospho Y449 Antibody is ideal for investigators involved in Cell Signaling, Signal Transduction and Immunology research.
Synonyms:	rabbit anti-IL-7 Receptor alpha pY449 antibody, rabbit anti-Interleukin-7 Receptor alpha pY449 antibody, IL7R alpha antibody, IL-7R alpha, IL 7R α, Interleukin7 Receptor, Interleukin 7 receptor alpha chain antibody, Interleukin 7 receptor α antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	IL17R

Reactivity:	Human, Mouse, Rat
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic phospho-peptide corresponding to residues near Y449 of mouse IL-7 protein.
Purity/Specificity:	This product was affinity purified from monospecific antiserum by immunoaffinity chromatography using phospho-peptide coupled to agarose beads followed by solid phase adsorption against non-phospho-peptide. This antibody is specific for mouse IL-7 protein phosphorylated at Y449. A BLAST analysis was used to suggest cross-reactivity with IL-7 from human, mouse and rat sources based on 100% homology with the immunizing sequence. Cross-reactivity with IL-7 from other sources has not been determined.
Relevant Links:	• UniProtKB - P16872 • NCBI - 45269152 • GeneID - 16197

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA, immunoprecipitation, and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 55 kDa in size corresponding to phosphorylated IL-7 by western blotting in the appropriate cell lysate or extract. This phospho-specific polyclonal antibody reacts with mouse IL-7 pY449 and shows minimal reactivity by ELISA against the non-phosphorylated form of the immunizing peptide.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000-1:50,000
IHC:	User Optimized
WB:	1:10,000

Formulation

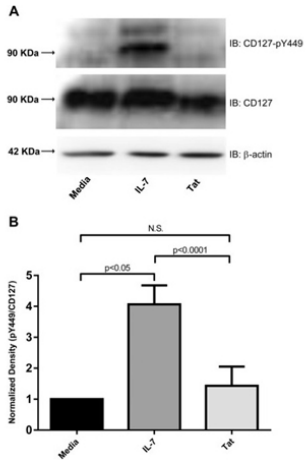
Physical State:	Liquid (sterile filtered)
Concentration:	0.72 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

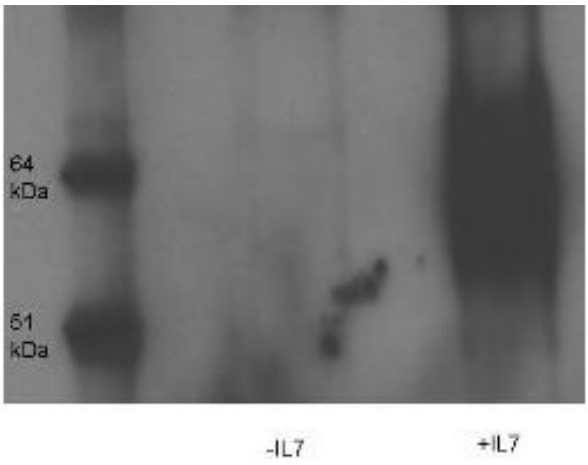
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store IL-7 Receptor Alpha Chain phospho Y449 Antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

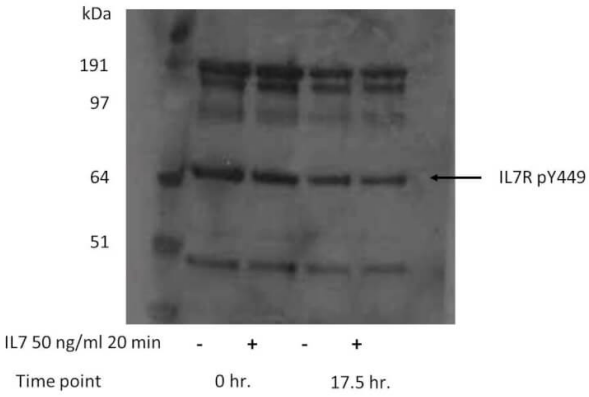
Images



Western Blot
Tat does not induce phosphorylation of CD127 at Y449. Primary human CD8 T cells were treated with either Tat (10 µg/mL) for 12 h, IL-7 (10 ng/mL) for 10 min, or left in medium alone. Cells were then lysed and analyzed by western blot for CD127 or CD127 phosphorylated at Y449. Blots were also probed for β-actin as a loading control. (A) Representative blots. (B) Bands were quantified via densitometry. Relative density of CD127 pY449 normalized to whole CD127 is shown. Error bars represent standard error of the mean (±). Statistical analysis was performed using a paired two-tailed student t-test (n=3). Fig. 1. PMID: 27596538



Western Blot
Western Blot and immunoprecipitation of Rabbit anti- IL-7-Receptor-alpha-chain-pY449 antibody. Lane 1: thymocyte D1 cells. Lane 2: thymocyte D1 cells treated with IL7 (50 ng/ml). IP: with anti-Phosphotyrosine conjugated to Protein G agarose. Primary antibody: IL7pY449 antibody at 1:10000 for overnight at 4°C. Secondary antibody: HRP-conjugated goat anti-rabbit antibody at 1:10,000 for 45 min at RT and ECL detection. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 55 kDa, ~64 kDa for IL7pY449. Other band(s): unspecifics.



Western Blot
Western Blot of Rabbit anti- IL-7-Receptor-alpha-chain-pY449 antibody. Load: thymocyte D1 cells treated with or without IL-7 (50 ng/ml) for 20 min. Primary antibody: IL7pY449 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 55 kDa, ~64 kDa for IL7pY449. Other band(s): unspecifics.

References

- Sugden S et al. HIV-1 tat protein recruits CIS to the cytoplasmic tail of CD127 to induce receptor ubiquitination and proteasomal degradation. *Virology.* (2016)

Disclaimer

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