Mouse IL-21 R PE-conjugated Antibody

Monoclonal Rat IgG_1 Clone # 155516

Catalog Number: FAB5961P

100 TESTS, 25 TESTS

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-21 R in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human IL-21 R or recombinant mouse IL-2 Rβ is observed.
Source	Monoclonal Rat IgG_1 Clone # 155516
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant mouse IL-21 R Cys20-Pro236 Accession # Q9JHX3
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

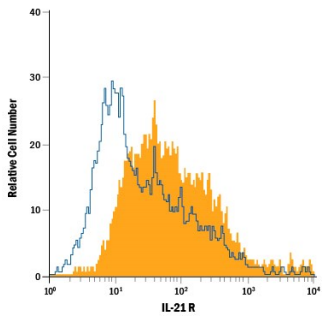
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of IL-21 R in A20 Mouse Cell Line by Flow Cytometry. A20 mouse B cell lymphoma cell line was stained with Rat Anti-Mouse IL-21 R PE-conjugated Monoclonal Antibody (Catalog # FAB5961P, filled histogram) or isotype control antibody (Catalog # IC005P, open histogram). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

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BACKGROUND

IL-21 R (interleukin-21 receptor) is a type I transmembrane glycoprotein within the class I cytokine receptor family, type 4 subfamily (1-5). Complex formation between IL-21 R and the common γ chain (γ_c), also used for IL-2, IL-4, IL-7, IL-9, IL-13 and IL-15 receptors, is required for signaling (6, 7). Mouse IL-21 R cDNA encodes 521 amino acid (aa) including a 19 aa signal peptide, a 218 aa extracellular domain (ECD) with 4 conserved cysteine residues, a fibronectin type III domain, and a WSXWS motif, a 21 aa transmembrane domain and a 271 aa cytoplasmic domain with a Box 1 motif, a kinase domain, and several sites for tyrosine phosphorylation (4, 5). One such site, pY510, mediates STAT binding (1, 2). The mouse IL-21 R ECD shares 69%, 91%, 65%, 63% and 58% aa identity with human, rat, equine, canine and bovine IL-21 R, respectively. One potential 447 aa isoform, with an alternate start site at aa 83, lacks the four conserved ECD cysteines. IL-21 R is expressed mainly on B cells (highest on mature, activated, follicular and germinal center B cells), NK cells, and activated T cells, but is also found on dendritic cells, alternatively activated macrophages, intestinal lamina propria fibroblasts and epithelial cells, and keratinocytes (1, 3-5). Both IL-21 and IL-4 are necessary for efficient B cell IgG_1 production and normal germinal center architecture (8). B cell IL-21 R engagement induces BLIMP-1 (which mediates plasma cell differentiation), and is important for memory responses (1, 9, 10). IL-21 R engagement on mouse NK cells enhances their cytotoxic activity and IFN-γ production (4, 11). IL-21 R engagement on $CD8^+$ T cells aids control of viral infection and tumor growth; IL-21 R is also necessary for sufficient numbers of regulatory T cells to combat chronic inflammation (1, 12, 13). IL-21 R expression is often upregulated in allergic skin inflammation, systemic lupus erythematosus and diffuse large B cell lymphoma (DLBCL) (1, 2, 14, 15).

References:

1. Leonard, W.J. *et al.* (2008) J. Leukoc. Biol. **84**:348.
2. Konforte, D. *et al.* (2009) J. Immunol. **182**:1791.
3. Monteleone, G. *et al.*, 2009, Cytokine Growth Factor Rev. **20**:185.
4. Parrish-Novak, *et al.* (2000) Nature **408**:57.
5. Ozaki, K. *et al.* (2000) Proc. Natl. Acad. Sci. USA **97**:11439.
6. Asao, H. *et al.* (2001) J. Immunol. **167**:1.
7. Habib, T. *et al.* (2002) Biochemistry **41**:8725.
8. Ozaki, K. *et al.* (2002) Science **298**:1630.
9. Rankin, A.L. *et al.* (2011) J. Immunol. **186**:667.
10. King, I.L. *et al.* (2010) J. Immunol. **185**:6138.
11. Kasaian, M.T. *et al.* (2002) Immunity **16**:559.
12. Frohlich, A. *et al.* (2009 Science **324**:1576.
13. Tortola, L. *et al.* (2010) Blood **116**:5200.
14. Jin, H. *et al.* (2009) J. Clin. Invest. **119**:47.
15. Sarosiek, K.A. *et al.* (2010) Blood **115**:570.

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bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956