Human IL-23 R Fluorescein-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 218213

Catalog Number: FAB14001F

100 TESTS, 25 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-23 R in direct ELISAs and Western blots. Does not cross-react with recombinant mouse IL-23 R.
Source	Monoclonal Mouse IgG_{2B} Clone # 218213
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-23 R Gly24-Ile354 Accession # Q5VWK5
Conjugate	Fluorescein Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm (FITC)
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.

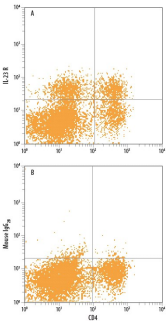
APPLICATIONS

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-23 R in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) treated with 50 ng/mL PMA, 200 ng/mL Calcium Ionomycin, 200 ng/mL LPS, 20 ng/mL Recombinant Human IL-23 (Catalog # 1290-IL), and 40 ng/mL Recombinant Human IL-6 (Catalog # 206-IL) overnight to induce Th17 development were stained with Mouse Anti-Human CD4 APC-conjugated Monoclonal Antibody (Catalog # FAB3791A) and either (A) Mouse Anti-Human IL-23 R Fluorescein-conjugated Monoclonal Antibody (Catalog # FAB14001F) or (B) Mouse IgG_{2B} Fluorescein Isotype Control (Catalog # IC0041F). 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.

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BACKGROUND

Interleukin 23 (IL-23) is a heterodimeric cytokine composed of two disulfide-linked subunits, a p19 subunit that is unique to IL-23, and a p40 subunit that is shared with IL-12 (1 - 5). The functional IL-23 receptor complex consists of two receptor subunits, the IL-12 receptor beta 1 subunit (IL-12 Rβ1) and the IL-23-specific receptor subunit (IL-23 R) (3). Human IL-23 R cDNA encodes a 629 aa type I transmembrane protein with a 23 aa residue signal peptide, a 330 aa residue extracellular domain, a 23 aa residue transmembrane domain and a 253 aa residue cytoplasmic region. IL-23 R shares structural features with the IL-12 Rβ2, including an N-terminal Ig-like domain, two cytokine receptor domains and multiple glycosylation sites in the extracellular domain. IL-23 R lacks the three extracellular membrane-proximal fibronectin-type III domains present on IL-12 Rβ2. IL-23 R has a WQPWS sequence in the transmembrane-proximal cytokine receptor domain similar to the cytokine receptor signature WSXWS motif. The cytoplasmic region of IL-23 R has three potential Src homology 2 domain-binding sites and two potential Stat-binding sites. The gene for human IL-23 R is located on human chromosome 1 within 150 kb of IL-12 Rβ2. Human and mouse IL-23 R share 66% amino acid sequence identity. Based on quantitative real-time PCR, human IL-23 R mRNA is expressed in a human Th1 and Th0 clone as well as several NK cell lines and clones. Low but detectable levels of IL-23 R mRNA is also expressed in EBV-transformed B cells and activated PBMC. IL-23 initiates a signal transduction cascade similar to that of IL-12, and involves Jak2, Tyk2, Stat1, Stat3, Stat4, and Stat5. IL-23 has biological activities that are similar to, but distinct from IL-12.

References:

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2. Lankford, C.S. and D.M. Frucht (2003) J. Leukoc. Biol. **73**:49.
3. Parham, C. *et al.* (2002) J. Immunol. **168**:5448.
4. Belladonna, M.L. *et al.* (2002) J. Immunol. **168**:5448.
5. Aggarwal, S. *et al.* (2003) J. Biol. Chem. **278**:1910.

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