

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-23 p19 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human (rh) IL-23 heterodimer is observed, less than 10% cross-reactivity with recombinant mouse (rm) IL-23 heterodimer is observed, and no cross-reactivity with recombinant feline IL-23 p19, recombinant canine (rca) IL-23 p19, and recombinant rat IL-23 p19 is observed. In Western blots, no cross-reactivity with rcaIL-23 p19 or rmlIL-23 p19 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 727753
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human IL-23 p19 Arg20-Pro189 Accession # Q9NPF7
<b>Conjugate</b>	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
<b>Formulation</b>	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.

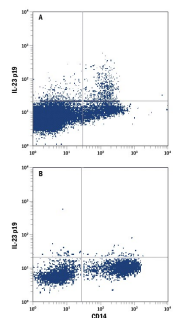
## APPLICATIONS

**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
<b>Intracellular Staining by Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA

### Intracellular Staining by Flow Cytometry



#### Detection of IL-23 in Human PBMCs by Flow Cytometry.

Human peripheral blood mononuclear cells (PBMCs), (A) treated with LPS, or (B) resting, were stained with Mouse Anti-Human IL-23 p19 PE-conjugated Monoclonal Antibody (Catalog # IC17161P) and Mouse Anti-Human CD14 APC-conjugated Monoclonal Antibody (Catalog # FAB3832A). Quadrant markers were set based on control antibody staining (Catalog # IC0041P). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for [Staining Intracellular Molecules](#).

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## 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 p19 subunit has homology to the p35 subunit of IL-12, as well as to other single chain cytokines such as IL-6 and IL-11. The p40 subunit is homologous to the extracellular domains of the hematopoietic cytokine receptors. Human and mouse p19 share 70% aa sequence identity. Although p19 is expressed by activated macrophages, dendritic cells, T cells, and endothelial cells, only activated macrophages and dendritic cells express p40 concurrently to produce IL-23. The functional IL-23 receptor complex consists of two receptor subunits, the IL-12 receptor beta 1 subunit (IL-12 R $\beta$ 1) and the IL-23-specific receptor subunit (IL-23 R). IL-23 has biological activities that are similar to, but distinct from IL-12. Both IL-12 and IL-23 induce proliferation and IFN- $\gamma$  production by human T cells. While IL-12 acts on both naïve and memory human T cells, the effects of IL-23 is restricted to memory T cells. In mouse, IL-23 but not IL-12, has also been shown to induce memory T cells to secrete IL-17, a potent proinflammatory cytokine. IL-12 and IL-23 can induce IL-12 production from mouse splenic DC of both the CD8<sup>-</sup> and CD8<sup>+</sup> subtypes, however only IL-23 can act directly on CD8<sup>+</sup> DC to mediate immunogenic presentation of poorly immunogenic tumor/self peptide.

## References:

1. Oppmann, B. *et al.* (2000) *Immunity* **13**:715.
2. Lankford, C.S. and D.M. Frucht (2003) *J. Leukoc. Biol.* **73**:49.
3. Parham, C. *et al.* (2002) *J. Immunol.* **168**:5699.
4. Belladonna, M.L. *et al.* (2002) *J. Immunol.* **168**:5448.
5. Aggarwal, S. *et al.* (2003) *J. Biol. Chem.* **278**:1910.