

## DESCRIPTION

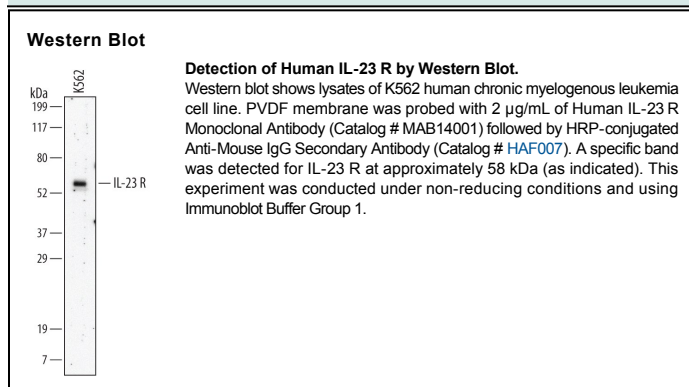
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-23 R in direct ELISAs and Western blots. Does not cross-react with recombinant mouse (rm) IL-23 R.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 218213
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human IL-23 R Gly24-Ile354 Accession # Q5VVK5
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## 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>Western Blot</b>	2 µg/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</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 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:

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**:5448.
4. Belladonna, M.L. *et al.* (2002) *J. Immunol.* **168**:5448.
5. Aggarwal, S. *et al.* (2003) *J. Biol. Chem.* **278**:1910.