**DESCRIPTION**

**Species Reactivity**  
Mouse

**Specificity**  
Detects mouse IL-23 R in Western blots. In Western blots, this antibody does not cross-react with recombinant human IL-23 R.

**Source**  
Monoclonal Rat IgG\textsubscript{2B} Clone # 258010

**Purification**  
Protein A or G purified from hybridoma culture supernatant

**Immunogen**  
Mouse myeloma cell line NS0-derived recombinant mouse IL-23 R
Gly24-Asp372  
Accession # Q8K4B4

**Endotoxin Level**  
<0.10 EU per 1 \( \mu \)g of the antibody by the LAL method.

**Formulation**  
Lyophilized from a 0.2 \( \mu \)m filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (SP) is supplied either lyophilized or as a 0.2 \( \mu \)m 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.

<table>
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<th>Recommended Concentration</th>
<th>Sample</th>
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| Western Blot              | 1 \( \mu \)g/mL  
Recombinant Mouse IL-23 R Fc Chimera (Catalog # 1686-MR) |

**Neutralization**  
Measured by its ability to neutralize IL-17-induced IL-17 secretion in mouse splenocytes. Aggarwal, S. et al. (2003) J. Biol. Chem. 278:1910. The Neutralization Dose (ND\textsubscript{50}) is typically 0.1-0.4 \( \mu \)g/mL in the presence of 0.75 ng/mL Recombinant Mouse IL-23 and 10 ng/mL Recombinant Mouse IL-2.

**DATA**

IL-17 Secretion Induced by IL-23 and Neutralization by Mouse IL-23 R Antibody. In the presence of Recombinant Mouse IL-2 (10 ng/mL, Catalog # 402-ML), Recombinant Mouse IL-23 (Catalog # 1687-ML) stimulates IL-17 secretion in mouse splenocytes in a dose-dependent manner (orange line), as measured by the Mouse IL-17 Quantikine ELISA Kit (Catalog # M1700). Under these conditions, IL-17 secretion elicited by Recombinant Mouse IL-23 (0.75 ng/mL) is neutralized (green line) by increasing concentrations of Mouse IL-23 R Monoclonal Antibody (Catalog # MAB1686). The ND\textsubscript{50} is typically 0.1-0.4 \( \mu \)g/mL.

**PREPARATION AND STORAGE**

**Reconstitution**  
Reconstitute at 0.5 mg/mL in sterile PBS.

**Shipping**  
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.

**Stability & Storage**  
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.
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). Mouse IL-23 R cDNA encodes a 644 amino acid (aa) type I transmembrane protein with a 23 aa residue signal peptide, a 349 aa residue extracellular domain, a 23 aa residue transmembrane domain and a 249 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. Mouse IL-23 R is expressed in mouse Th1 and Th2 cells, bone marrow, dendritic cells and macrophages. It is also expressed by mouse CD4+ CD45RB<sup>lo</sup> memory T cells but at much lower levels by mouse CD4+ CD45RB<sup>hi</sup> cells. 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: