# Recombinant Cynomolgus Monkey IL-23R His-tag

Catalog Number: 10331-IR

## DESCRIPTION

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|---|---|
| **Source** | Human embryonic kidney cell, HEK293-derived cynomolgus monkey IL-23R protein<br>Gly24-Asp353, with a C-terminal 6-His tag<br>Accession # XP_005543141.1 |
| **N-terminal Sequence Analysis** | Gly24 |
| **Structure / Form** | Monomer |
| **Predicted Molecular Mass** | 39 kDa |

## SPECIFICATIONS

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| **SDS-PAGE** | 63-70 kDa, under reducing conditions |
| **Activity** | Measured by its binding ability in a functional ELISA.<br>When Recombinant Human IL-23 Protein (Catalog # 1290-IL) is immobilized at 5.00 µg/mL (100 µL/well), the concentration of Recombinant Cynomolgus Monkey IL-23R His-tag (Catalog # 10331-IR) that produces 50% of the optimal binding response is found to be approximately 75.0-450 ng/mL |
| **Endotoxin Level** | <0.10 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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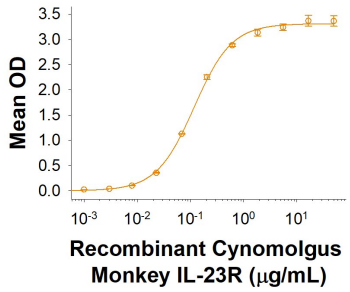
| **Reconstitution** | Reconstitute at 200 µg/mL in PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>• 12 months from date of receipt, -20 to -70 °C as supplied.<br>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>• 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

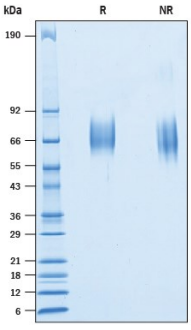
## DATA

**Binding Activity**




**Recombinant Cynomolgus Monkey IL-23R His-tag Protein Binding Activity** When Recombinant Human IL-23 Protein (Catalog # Catalog # 1290-IL) is immobilized at 5.00 µg/mL (100 µL/well), the concentration of Recombinant Cynomolgus Monkey IL-23R His-tag Protein (Catalog # 10331-IR) that produces 50% of the optimal binding response is found to be approximately 75.0-450 ng/mL.

**SDS-PAGE**




**Recombinant Cynomolgus Monkey IL-23R His-tag Protein SDS-PAGE** 2 µg/lane of Recombinant Cynomolgus Monkey IL-23R His-tag (Catalog # 10331-IR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 63-70 kDa.



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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-12R beta 1) and the IL-23-specific receptor subunit (IL-23R) (3). Human IL-23R cDNA encodes a 629 amino acids (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-12R beta 2, including an N-terminal Ig-like domain, two cytokine receptor domains and multiple glycosylation sites in the extracellular domain. IL-23R lacks the three extracellular membrane-proximal fibronectin-type III domains present on IL-12R beta 2. IL-23R has a WQPWS sequence in the transmembrane-proximal cytokine receptor domain similar to the cytokine receptor signature WSXWS motif (6). The cytoplasmic region of IL-23R has three potential Src homology 2 domain-binding sites and two potential Stat-binding sites. The gene for human IL-23R is located on human chromosome 1 within 150 kb of IL-12R beta 2. Based on quantitative real-time PCR, human IL-23R 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-23R 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 (2). The Cynomolgus IL-23R shares 96%, 71% and 77% amino acid sequence identity to Human, mouse, and rat IL-23R, respectively.

**References:**

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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.
6. Schroder, J. *et al.* (2015) J. Biol. Chem. **290**:359.



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