

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-23 p19/p40 heterodimers and p19 subunits in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human p19 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 320229
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-23 p19 and <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse IL-23 heterodimers Met23-Ser335 (p40) & Leu20-Ala196 (p19) Accession # P43432 (p40) & Q9EQ14 (p19)
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

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

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. Mouse p19 cDNA encodes a 196 amino acid residue (aa) precursor protein with a putative 19 aa signal peptide and 177 aa mature protein. 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 Rβ1) 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-γ 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⁻ and CD8⁺ subtypes, however only IL-23 can act directly on CD8⁺ DC to mediate immunogenic presentation of poorly immunogenic tumor/self peptide.

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