

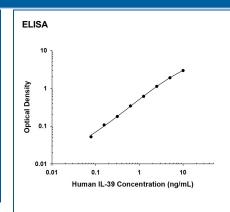
Human IL-23 p19 Antibody

Monoclonal Mouse IgG_{2B} Clone # 727753 Catalog Number: MAB17161

DESCRIPTION		
Species Reactivity	Human	
Specificity	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 cross-reactivity with recombinant feline IL-23 p19, recombinant canine (rca) IL-23 p19, and recombinant rat IL-23 p19 is observed. In West blots, no cross-reactivity with rcaIL-23 p19 or rmIL-23 p19 is observed.	
Source	Monoclonal Mouse IgG _{2B} Clone # 727753	
Purification	Protein A or G purified from hybridoma culture supernatant	
Immunogen	E. coli-derived recombinant human IL-23 p19 Arg20-Pro189 Accession # Q9NPF7	
Formulation	Lyophilized from a 0.2 µm 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 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.				
Western Blot	1 μg/mL	See Below		
ELISA	This antibody functions as an ELISA capture antibody when paired with Mouse Anti-Human EBI3 Monoclonal Antibody (Catalog # MAB64561).			
	This product is intended for assay development on various assay platforms requiring antibody pairs.			

Western Blot Detection of Human IL-23 p19 by Western Blot. Western blot shows lysates of CHO Chinese hamster ovary cell line transfected with human IL-23. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human IL-23 p19 Monoclonal Antibody (Catalog # MAB17161) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # Catalog # HAF007). A specific band was detected for IL-23 p19 at approximately 21 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.



Human IL-39 ELISA Standard Curve. Recombinant Human IL-39 protein was serially diluted 2fold and captured by Mouse Anti-Human IL-23 p19 Monoclonal Antibody (Catalog # MAB17161) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human EBI3 Monoclonal Antibody (Catalog # MAB64561) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog #

PREPARATION AND STORAGE			
Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.		
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.		

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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 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% as 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 secret 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.

References

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- 2. Lankford, C.S. and D.M. Frucht (2003) J. Leukoc. Biol. 73:49.
- 3. Parham, C. et al. (2002) J. Immunol. 168:5699.
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- 5. Aggarwal, S. et al. (2003) J. Biol. Chem. 278:1910.

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