

Human IL-23 p19 Antibody

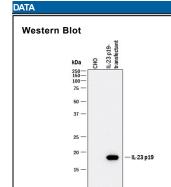
Recombinant Monoclonal Rabbit IgG_{2B} Clone # 1193B Catalog Number: MAB12901

DESCRIPTION		
Species Reactivity	Human	
Specificity	Detects human IL-23 p19 in direct ELISAs and Western blots.	
Source	Recombinant Monoclonal Rabbit IgG _{2B} Clone # 1193B	
Purification	Protein A or G purified from cell 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.	

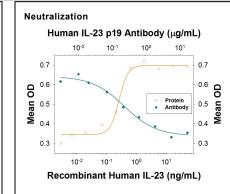
APPLICATIONS

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.

	Recommended Concentration	Sample	
Western Blot	1 μg/mL	See Below	
Neutralization	Measured by its ability to neutralize IL-23-induced IL-17 secretion in mouse splenocytes. Aggarwal, S. <i>et al.</i> (2003) J. Biol. Chem. 278 :1910. The Neutralization Dose (ND ₅₀) is typically 0.15-0.9 μg/mL in the presence of 0.3 ng/mL		
	Recombinant Human	IL-23.	



Detection of Human IL-23 p19 by Western Blot. Western blot shows lysates of CHO Chinese hamster ovary cell line either mock transfected or transfected with human IL-23 p19. PVDF membrane was probed with 1 μg/mL of Rabbit Anti-Human IL-23 p19 Monoclonal Antibody (Catalog # MAB12901) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for IL-23 p19 at approximately 19 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer



IL-17 Secretion Induced by IL-23 and Neutralization by Human IL-23 Antibody. Recombinant Human IL-23 (Catalog # 1290-IL) 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 Human IL-23 (0.3 ng/mL) is neutralized (green line) by increasing concentrations of Rabbit Anti-Human IL-23 p19 Monoclonal Antibody (Catalog # MAB1290). The ND₅₀ is typically 0.15-0.9 µg/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.

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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 p19 cDNA encodes a 189 amino acid residue (aa) precursor protein with a putative 19 aa signal peptide and 170 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-y 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:

- 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. 168:5699.
- 4. Belladonna, M.L. et al. (2002) J. Immunol. 168:5448.
- 5. Aggarwal, S. et al. (2003) J. Biol. Chem. 278:1910.

