

Human IL-23 p19 Antibody

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: AF1716

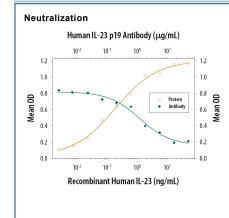
DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human IL-23 p19 in direct ELISAs and Western blots. In these formats, less than 5% cross-reactivity with recombinant huma IL-12/23 p40 is observed.		
Source	Polyclonal Goat IgG		
Purification	Antigen Affinity-purified		
Immunogen	E. coli-derived recombinant human IL-23 p19 Arg20-Pro189 Accession # AAG37232		
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.		
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.		

APPLICATIONS

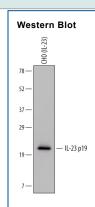
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website

	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 0.2-0.8 μg/mL in the presence of 0.75 ng/mL Recombinant Human IL-23 and 10 ng/mL Recombinant Mouse IL-2.	
	Recombinant Human	it-23 and 10 ng/mt Recombinant Mouse it-2.

DATA



IL-17 Secretion Induced by IL-23 and Neutralization by Human IL-23 Antibody. In the presence of Recombinant Mouse L-2 (10 ng/mL, Catalog # 402-ML), Recombinant Human IL-23 (Catalog # 1290-IL) stimulates IL-17 secretion in mouse splenocytes in a dosedependent 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 (0.75 ng/mL) is neutralized (green line) by increasing concentrations of Human IL-23 p19 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1716). The ND₅₀ is typically 0.2-0.8 ug/mL.



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 Goat Anti-Human IL-23 p19 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1716) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). 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.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile 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.		

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.

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. 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 R\beta1) 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.

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