IL-23 p19 Monoclonal Antibody (G23-8), Functional Grade, eBioscience™

Product Details	
Size	50 µg
Species Reactivity	Mouse
Host/Isotope	Rat / IgG1, kappa
Recommended Isotype Control	Rat IgG1 kappa Isotype Control (eBRG1), Functional Grade, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	G23-8
Conjugate	Functional Grade
Form	Liquid
Concentration	1 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	no preservative
Storage Conditions	4° C
RRID	AB_469240

Applications	Tested	Dilution	Published
Neutralization (Neu)	✓	Assay-Dependent	1 Publication
ELISA (ELISA)	✓	1.25 µg/mL	
Functional Assay (FN)	✓	Assay-Dependent	
Western Blot (WB)	✓	Assay-Dependent	

Product Specific Information

Description: The G23-8 antibody reacts with the p19 subunit of mouse IL-23. The G23-8 antibody was generated from immunization with authentic, insect cell-expressed, recombinant mouse IL-23 heterodimer. The G23-8 antibody can specifically neutralize IL-23 bioactivity with no effect on IL-12 p70 bioactivity.

The use of a p19-specific capture antibody and a p40-specific detection antibody yields an IL-23 ELISA which is exquisitely specific for mouse IL-23. IL-12 p40 homodimer and IL-12 p70 were each run in the assay at 500 ng/mL with no interference or cross-reactivity observed. A panel of 20 unrelated cytokines was run in the IL-23 ELISA at 100 ng/mL with no cross reactivity observed; all values were at the limit of detection of the assay. For measurement of total p40 protein levels, the Mouse IL-12/23 Total p40 ELISA Ready-SET-Go! is available (88-7120).

IL-23 is a heterodimeric cytokine composed of the p40 subunit of IL-12 disulfide-linked with a protein p19. p19, like p35 of IL-12, is biologically inactive by itself. IL-23 interacts with IL-12Rbeta1 and an additional, novel beta2-like receptor subunit with STAT4 binding domain, termed IL-23R. IL-23 is secreted by activated mouse and human dendritic cells. Biological activities of mouse IL-23 are distinct from those of mouse IL-12. Mouse IL-23 was found not to induce significant amounts of IFN-g. Mouse IL-23 does induce strong proliferation of memory T cells (but not naive T cells), whereas IL-12 has no effect on memory cells. Additionally, mouse IL-23 (but not IL-12) can activate mouse memory T cells to produce the proinflammatory cytokine IL-17. Human IL-23 has biological properties which are less distinct from human IL-12; human IL-23 induces proliferation of memory T cells and induces moderate levels of IFN-g production by naive and memory T cells, as compared to IL-12.

Applications Reported: The G23-8 antibody has been reported for use as the capture antibody in mouse IL-23 ELISA, for Western blotting, and for neutralization of mouse IL-23 bioactivity.

Applications Tested: The Functional Grade purified format of the G23-8 antibody has been tested as the capture antibody in an IL-23 ELISA assay (in conjunction with the biotinylated C17.8 antibody) and for neutralization of IL-23 biological activity.

For in vitro neutralization, the Functional Grade purified G23-8 antibody at 1.25 µg/mL has been found to neutralize by 50% the biological effect of 0.1 ng/mL mouse IL-23 in an assay of IL-17 secretion by mouse splenocytes. The G23-8 antibody has no effect on the bioactivity of mouse IL-12 p70. For neutralization of both IL-12 p70 and IL-23 p19p40, the anti-IL-12/IL-23 p40 antibody, clone C17.8, is recommended. Detailed information and protocols about cytokine bioassays and in vitro cytokine neutralization using antibodies can be found in the BestProtocols® section.

A suitable range of concentrations of this antibody for ELISA capture is 1-4 µg/mL. A standard curve consisting of doubling dilutions of the recombinant standard over the range of 4000 pg/mL - 30 pg/mL should be included in each ELISA plate.

Note: TMB, rather than ABTS, should be used as a substrate to achieve this sensitivity level.

Endotoxin: Less than 0.001 ng/ug antibody as determined by the LAL assay.

Storage and handling: Use in a sterile environment.

Filtration: 0.2 µm post-manufacturing filtered.

Purity: Greater than 90%, as determined by SDS-PAGE.

Endotoxin Level: Less than 0.001 ng/µg antibody, as determined by LAL assay.

Aggregation: Less than 10%, as determined by HPLC.

1 Reference

Neutralization (1)

European journal of immunology

Overexpression of phospholipase C in keratinocytes upregulates cytokine expression and causes dermatitis with acanthosis and T-cell infiltration.

"Published figure using IL-23 p19 monoclonal antibody (Product # 16-7232-81) in Neutralization"

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Species
Not Applicable

Dilution
Not Cited

Year
2011