

Anti-Mouse IL-23 p19 Functional Grade Purified

Catalog Number: 16-7232

Also Known As: Interleukin-23, p40, p19

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Anti-Mouse IL-23 p19 Functional Grade Purified

 **Catalog Number:** 16-7232

Clone: G23-8

Concentration: 1 mg/mL

Host/Isotype: Rat IgG1, kappa

Handling Conditions: Use in sterile environment.

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

Formulation: aqueous buffer, no sodium azide



Temperature Limitation: Store at 2-8°C.



Batch Code: Refer to Vial



Use By: Refer to Vial

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 naïve 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 naïve 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 ug/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.

References

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88-7121 Mouse IL-12 p70 ELISA Ready-SET-Go!®

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88-7234 Mouse IL-23 ELISA Ready-SET-Go!®

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