

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

| Product Details | |
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| Size | 50 µg |
| Species Reactivity | Mouse |
| Published Species | Mouse |
| Host/Isotype | 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 | Publications |
|-----------------------------|-----------------|----------------|
| Western Blot (WB) | Assay-Dependent | - |
| ELISA (ELISA) | 1.25 µg/mL | - |
| Neutralization (Neu) | Assay-Dependent | 2 Publications |
| Functional Assay (FN) | Assay-Dependent | - |
| In vitro Assay (IV) | - | 2 Publications |
| Miscellaneous PubMed (Misc) | - | 1 Publication |

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- γ 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 $\mu\text{g/mL}$ 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 $\mu\text{g/mL}$. 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.

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.

Neutralization (2)

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| Scientific reports | Year 2018 |
| Intraperitoneal administration of the anti-IL-23 antibody prevents the establishment of intestinal nematodes in mice. | |
| "Published figure using IL-23 p19 monoclonal antibody (Product # 16-7232-81) in Neutralization" | |
| Authors: Gomez-Sambblas M,Bernal D,Bolado-Ortiz A,Vilchez S,Bolás-Fernández F,Espino AM,Trelis M,Osuna A | |
| European journal of immunology | Year 2011 |
| Overexpression of phospholipase C in keratinocytes upregulates cytokine expression and causes dermatitis with acanthosis and T-cell infiltration. | Species Mouse |
| "Published figure using IL-23 p19 monoclonal antibody (Product # 16-7232-81) in Neutralization" | Dilution 1:100 |
| Authors: Takenaka N,Edamatsu H,Suzuki N,Saito H,Inoue Y,Oka M,Hu L,Kataoka T | |

In vitro Assay (2)

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| Clinical cancer research : an official journal of the American Association for Cancer Research | Year 2019 |
| IL23-Producing Human Lung Cancer Cells Promote Tumor Growth via Conversion of Innate Lymphoid Cell 1 (ILC1) into ILC3. | Species Mouse |
| "16-7232-81 was used in In vitro Assay to explore plasticity of innate lymphoid cells in human lung cancer." | |
| Authors: Koh J,Kim HY,Lee Y,Park IK,Kang CH,Kim YT,Kim JE,Choi M,Lee WW,Jeon YK,Chung DH | |
| Cell reports | Year 2019 |
| Macrophage 2-Integrins Regulate IL-22 by ILC3s and Protect from Lethal Citrobacter rodentium-Induced Colitis. | Species Mouse |
| "16-7232 was used in In vitro Assay sorting to conclude that 2-integrins are required for protective IL-1-dependent IL-22 responses in colitis, and the identified mechanism may underlie the association of human LAD1 with colitis." | |
| Authors: Wang B,Lim JH,Kajikawa T,Li X,Vallance BA,Moutsopoulos NM,Chavakis T,Hajishengallis G | |

More applications with references on thermofisher.com

Misc (1)

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