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

Product Details	
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-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.

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.

5 References

Neutralization (2)

Scientific reports

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-Samblas M,Bernal D,Bolado-Ortiz A,Vilchez S,Bolás-Fernández F,Espino AM,Trelis M,Osuna A

Year 2018

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"

Authors: Takenaka N,Edamatsu H,Suzuki N,Saito H,Inoue Y,Oka M,Hu L,Kataoka T

Year 2011

Species Mouse

Dilution 1:100

In vitro Assay (2)

Clinical cancer research : an official journal of the American Association for Cancer Research

IL23-Producing Human Lung Cancer Cells Promote Tumor Growth via Conversion of Innate Lymphoid Cell 1 (ILC1) into ILC3.

"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

Year 2019

Species Mouse

Cell reports

Macrophage 2-Integrins Regulate IL-22 by ILC3s and Protect from Lethal Citrobacter rodentium-Induced Colitis.

"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

Year 2019

Species Mouse

More applications with references on thermofisher.com

Misc (1)