

Anti-Human IL-23 p19 Purified

Catalog Number: 14-7238

Also known as: Interleukin-23, p40, p19

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

Product Information



Contents: Anti-Human IL-23 p19 Purified

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Clone: eBio473P19

Concentration: 0.5 mg/mL

Host/Isotype: Mouse IgG1, kappa



Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

Temperature Limitation: Store at 2-8°C.

Batch Code: Refer to vial

Use By: Refer to vial

Caution, contains Azide

Description

The antibody eBio473P19 reacts with the p19 subunit of human IL-23. The eBio473P19 antibody was generated from immunization with authentic, insect cell-expressed, recombinant human IL-23 heterodimer.

The use of a p19-specific capture antibody and a p40-specific detection antibody yields a human IL-23 sandwich ELISA exquisitely specific for human IL-23. IL-12 p40 monomer and IL-12 p70 were run in the assay at 200 ng/ml with no interference or cross-reactivity observed. A panel of 20 unrelated cytokines was also run in the IL-23 ELISA at 100 ng/ml with no cross reactivity observed. The assay has been validated by specific detection of significant levels of native human IL-23 protein in supernatants from a variety of different activated dendritic cell populations.

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. IL-23-dependent, IL-17-producing CD4+ T cells (Th-17 cells) have been identified as a unique subset of Th cells that develops along a pathway that is distinct from the Th1- and Th2- cell differentiation pathways. The hallmark effector molecules of Th1 and Th2 cells, e.g., IFN-g and IL-4, have each been found to negatively regulate the generation of these Th-17 cells. More recently, de novo differentiation of Th-17 cells in the absence of IL-23 has been demonstrated by treatment of naïve CD4 cells with TGF beta1 and IL-6.

Applications Reported

This eBio473P19 antibody has been reported for use in immunoblotting (WB), and ELISA.

Applications Tested

The eBio473P19 antibody has been tested as the capture antibody in a sandwich ELISA for analysis of human IL-23 (p19p40) protein levels in combination with the biotinylated (p40-specific) C8.6 antibody (13-7129) for detection and recombinant human IL-23 (14-8239) as the standard. A suitable range of concentrations of this antibody for ELISA capture is 2.5-8.0 µg/mL. A standard curve consisting of doubling dilutions of the recombinant IL-23 standard over the range of 2000 pg/mL - 15 pg/mL should be included in each ELISA plate. TMB, rather than ABTS, should be used as the substrate.

The antibody eBio473p19 also works in immunoblotting under both reducing and nonreducing conditions at 2 µg/mL.

Related Products

13-7129 Anti-Human IL-12/IL-23 p40 Biotin (C8.6)

14-8239 Human IL-23 Recombinant Protein

88-7126 Human IL-12 p70 ELISA Ready-SET-Go!®

88-7231 Mouse IL-23 (Interleukin-23, IL23) ELISA Ready-SET-Go! Kit (with Pre-Coated Plates)

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88-7234 Mouse IL-23 ELISA Ready-SET-Go!® (Discontinued: Please see 88-7230 (2nd generation assay))

88-7879 Human IL-12 p70 ELISPOT Ready-SET-Go!®

88-7921 Mouse IL-12 (Interleukin-12, IL12) p70 ELISA Ready-SET-Go! Kit (See replacement item BMS6004)

88-7929 Human IL-12 (Interleukin-12, IL12) p70 ELISA Ready-SET-Go! Kit (To Be Discontinued. See replacement item BMS238)