



Anti-IL23A monoclonal antibody, clone 430345 (DCABY-4102)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Antigen Description

Interleukin 23 (IL-23) is a heterodimeric cytokine composed of two disulfide-linked subunits, a p19 subunit that is unique to IL-23, and a p40 subunit that is shared with IL-12. The p19 subunit has homology to the p35 subunit of IL-12, as well as to other single chain cytokines such as IL-6 and IL-11. The p40 subunit is homologous to the extracellular domains of the hematopoietic cytokine receptors. Mouse p19 cDNA encodes a 196 amino acid residue (aa) precursor protein with a putative 19 aa signal peptide and 177 aa mature protein. Human and mouse p19 share 70% aa sequence identity. Although p19 is expressed by activated macrophages, dendritic cells, T cells, and endothelial cells, only activated macrophages and dendritic cells express p40 concurrently to produce IL-23. The functional IL-23 receptor complex consists of two receptor subunits, the IL-12 receptor beta 1 subunit (IL-12 R beta 1) and the IL-23-specific receptor subunit (IL-23 R). IL-23 has biological activities that are similar to, but distinct from IL-12. Both IL-12 and IL-23 induce proliferation and IFN-gamma production by human T cells. While IL-12 acts on both naive and memory human T cells, the effects of IL-23 is restricted to memory T cells. In mouse, IL-23 but not IL-12, has also been shown to induce memory T cells to secrete IL-17, a potent proinflammatory cytokine. IL-12 and IL-23 can induce IL-12 production from mouse splenic DC of both the CD8- and CD8+ subtypes, however only IL-23 can act directly on CD8+ DC to mediate immunogenic presentation of poorly immunogenic tumor/self peptide.

Specificity

Detects mouse IL-23 in ELISAs and Western blots. This antibody recognizes an epitope in the p19 subunit. In ELISAs, this antibody does not cross-react with recombinant mouse (rm) IL-23 p19, rmIL-23 R, rmIL-12 R beta, rmIL-12 p35, recombinant human (rh) IL-23, rhIL-23 p19, recombinant rat IL-12, rmIL-12 p40, rmIL-12 p40 homodimer, or rmIL-12.

Immunogen

E. coli-derived recombinant mouse IL-23

Isotype

IgG2a

Source/Host

Rat

Species Reactivity

Mouse

Clone	430345
Purification	Protein A or G purified from hybridoma culture supernatant
Conjugate	Unconjugated
Applications	Western Blot, ELISA Capture (Matched Pair)
Format	Liquid
Size	500 µg
Buffer	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Preservative	None
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

GENE INFORMATION

Gene Name	IL23a interleukin 23, alpha subunit p19 [Mus musculus (house mouse)]
Official Symbol	IL23A
Synonyms	IL23A; interleukin 23, alpha subunit p19; p19; IL-23; interleukin-23 subunit alpha; IL-23-A; IL-23p19; IL-23 subunit alpha; interleukin-23 subunit p19;
Entrez Gene ID	83430
Protein Refseq	NP_112542
UniProt ID	Q9EQ14
Chromosome Location	10 D3; 10
Pathway	Cytokine-cytokine receptor interaction; Inflammatory bowel disease (IBD); Jak-STAT signaling pathway; Pertussis; Rheumatoid arthritis; Tuberculosis;
Function	cytokine activity; contributes_to interleukin-23 receptor binding; protein binding;