

Anti-Mouse IL-9 Functional Grade Purified

Catalog Number: 16-7093

Also known as: Interleukin-9, Cytokine P40

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

Product Information

Contents: Anti-Mouse IL-9 Functional Grade Purified



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Clone: D9302C12

Concentration: 1 mg/mL

Host/Isotype: Armenian Hamster IgG

Handling Conditions: Use in sterile environment.

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

Bioactivity: The ND50 of D9302C12, as measured by the inhibition TS-1 cell proliferation, is less than or equal to 500 ng/mL in the presence of 0.1 ng/mL of Mouse IL-9 Recombinant Protein.



Formulation: aqueous buffer, no sodium azide
Temperature Limitation: Store at 2-8°C.

Batch Code: Refer to vial

Use By: Refer to vial

Description

This monoclonal D9302C12 antibody reacts with and inhibits the bioactivity of mouse IL-9. IL-9 is a 14 kDa cytokine originally named P40 and identified by its proliferative effects on T cell populations. The receptor, which is a heterodimer of the gamma chain portion of the IL-2 receptor and the IL-9R chain, activates Jak/STAT signaling pathways upon binding its ligand. Since the discovery of IL-9, numerous other functions have been observed. It induces Th17 and Treg differentiation in CD4+ T cells, IgE production in B cells, and the differentiation and proliferation of mast cells. IL-9 expression was initially observed in Th2 cells, but has since been found in Th17, eosinophil, and mast cells. Th9 cells, a newly discovered subset of CD4+ T cells, are characterized by the secretion of large amounts of IL-9 and IL-10. Th9 development is induced by stimulation of undifferentiated CD4+ with IL-4 and TGF beta. Th2 cells can also be driven towards a Th9 phenotype in the presence of TGF beta.

Applications Reported

The D9302C12 antibody inhibits the bioactivity of mouse IL-9.

Applications Tested

The ND50 of D9302C12, as measured by the inhibition TS-1 cell proliferation, is less than or equal to 500 ng/mL in the presence of 0.1 ng/mL of Mouse IL-9 Recombinant Protein. Neutralization dose will vary depending on assay method, cytokine concentration, and cell type. This antibody should be carefully titrated for optimal performance in the assay of interest.

References

Stumhofer JS, Tait ED, Quinn WJ 3rd, Hosken N, Spudy B, Goenka R, Fielding CA, O'Hara AC, Chen Y, Jones ML, Saris CJ, Rose-John S, Cua DJ, Jones SA, Elloso MM, Grotzinger J, Cancro MP, Levin SD, Hunter CA. A Role for IL-27p28 as an antagonist of gp130-mediated signaling. *Nat Immunol.* 2010 Dec;11(12):1119-26.

Stumhofer JS and Hunter CA. Advances in understanding the anti-inflammatory properties of IL-27. *Immunol Lett.* 2008 May 15; 117(2): 123-30.

Yoshimura A, Yoshida H, Miyazaki Y, Kinjyo I, Ishibashi T, Yoshimura T, Takeda A, Hamano S. Two sided roles of IL-27: induction of Th1 differentiation on Naïve CD4+ T cells versus suppression of proinflammatory cytokine production including IL-23-induced IL-17 on activated CD4+ T cells partially through STAT3-dependent mechanism. *J Immunol.* 2006; 177: 5377-85.

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14-8952 Mouse IL-9 Recombinant Protein

16-4888 Armenian Hamster IgG Isotype Control Functional Grade Purified (eBio299Arm)