

Human IL-9 Recombinant Protein


Catalog Number: 14-8958

Also Known As: Interleukin-9, IL9

RUO: For Research Use Only

Product Information

Contents: Human IL-9 Recombinant Protein

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Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment


Source: E. coli

Purity: Greater than 97%, as determined by SDS-PAGE


Endotoxin Level: Less than 0.01 ng/ug cytokine as determined by the LAL assay.

Bioactivity: Measured by MO7e cell proliferation assay. The ED₅₀ is 0.1 ng/ml, corresponding to a specific activity of 10⁷ Units/mg.

Formulation: Sterile liquid; 10 mM phosphate, 150 mM NaCl, 1.0% BSA. 0.22 µm filtered.

 Temperature Limitation: Store at less than or equal to -70°C.

 Batch Code: Refer to Vial

 Use By: Refer to Vial

Description

Interleukin-9 (IL-9) is a proinflammatory cytokine historically believed to be involved in type 2 immune responses. However, recent evidence suggests IL-9 may be secreted by a distinct T Helper lineage called Th9. These cells can either be derived from Th2 cells with TGF-β or differentiated directly from naïve CD4+ T cells with TGF-β and IL-4.

IL-9 is a member of the common cytokine receptor γ chain-dependent family of cytokines which also includes IL-2, IL-4, IL-7, IL-15 and IL-21. Its pleiotropic effects on Th2 lymphocytes, B lymphocytes, mast cells, eosinophils and gut and airway epithelial cells have implicated IL-9 in asthma and other allergy-related disorders.

Applications Reported

Purified Recombinant human IL-9 has been reported for use in cytokine bioassays.

Note: This product is for bioassay use only. For ELISA standard, please use Single-Use ELISA RSG Standard Recombinant Human IL-9 (cat. 39-8959).

Applications Tested

This recombinant human IL-9 has been tested by bioassays using the cell line MO7e. The ED₅₀ measured in the MO7e proliferation assay is typically less than 0.1 ng/ml, corresponding to a specific activity of greater than 10⁷ Units/mg.

References

Marc Veldhoen., et al. 2008. Transforming growth factor- 'reprograms' the differentiation of T helper 2 cells and promotes an interleukin 9-producing subset. Nature Immunology. Published online: 19 October 2008.

Matsuzawa, S., et al. 2003. IL-9 enhances the growth of human mast cell progenitors under stimulation with stem cell factor. J. Immun. 170: 3461-3467.

Nicolaidis, N. C. et al. 1997. Interleukin 9: a candidate gene for asthma. Proc. Nat. Acad. Sci. 94: 13175-13180.

Kelleher, K. et al. 1991. Human interleukin-9: genomic sequence, chromosomal location, and sequences essential for its expression in human T-cell leukemia virus (HTLV)-I-transformed human T cells. Blood 77: 1436-1441.

Related Products

14-8049 Human IL-4 Recombinant Protein

14-8348 Human TGF beta 1 Recombinant Protein

14-8952 Mouse IL-9 Recombinant Protein

