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Recombinant Human Interleukin-9

Catalog No.: PA1084X

Quantity: 10 µg

Concentration: 1 mg/ml

Background: Factor that is thought to be a regulator of hematopoiesis. It has been shown to enhance the growth of human mast cells and megakaryoblastic leukemic cells as well as murine helper t-cell clones. IL-9 is a glycoprotein with a molecular weight of 32-39 that is derived from T-cells, and maps to human chromosome 5.

Species: Human

Source: E. coli

Format: **State:** Sterile Filtered White lyophilized (freeze-dried) powder.
Purity: ›98% Greater than 98.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.
Buffer System: Lyophilized from a concentrated solution in water containing no additives.
Reconstitution: It is recommended to reconstitute the lyophilized Interleukin-9 in sterile 18MĎ?-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Description: Interleukin-9 Human Recombinant produced in E.Coli is a single, non-glycosylated single polypeptide chain containing 127amino acids. The IL-9 is purified by proprietary chromatographic techniques.
AA Sequence:
`The sequence of the first five N-terminal amino acids was determined and was found to be Met-Gln-Gly-Cys-Pro.`
Biological Activity: The ED50 as determined by the dose-dependant stimulation of human MO7e cells is ‹ 0.2 ng/ml, corresponding to a Specific Activity of 5 x 106 IU/mg.
Molecular weight: 14 kDa 14004 Dalton.

Storage: Lyophilized Interleukin-9 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL9 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

General Readings:
1. Qiu L, Lai R, Lin Q, Lau E, Thomazy DM, Calame D, et al. Autocrine release of interleukin-9 promotes Jak3-dependent survival of ALK+ anaplastic large-cell lymphoma cells. Blood. 2006 Oct 1;108(7):2407-15. Epub 2006 Jun 8. PubMed PMID: 16763206.
2. McNamara PS, Smyth RL. Interleukin-9 as a possible therapeutic target in both asthma and chronic obstructive airways disease. Drug News Perspect. 2005 Dec;18(10):615-21. PubMed PMID: 16491163.
3. Devos S, Cormont F, Vrtala S, Hooghe-Peters E, Pirson F, Snick J. Allergen-induced

interleukin-9 production in vitro: correlation with atopy in human adults and comparison with interleukin-5 and interleukin-13. Clin Exp Allergy. 2006 Feb;36(2):174-82. PubMed PMID: 16433854.
4. Expression of interleukin-9 in nasal natural kill er/T-cell lymphoma cell lines and patients. Clin Cancer Res 2005 Dec 1;11(23):8250-7
5. Poulin LF, Habran C, Stordeur P, Goldman M, McKenzie A, Van Snick J, et al. Interleukin-9 stimulates the production of interleukin-5 in CD4+ T cells. Eur Cytokine Netw. 2005 Sep;16(3):233-9. PubMed PMID: 16266865.
6. Yang L, Aozasa K, Oshimi K, Takada K. Epstein-Barr virus (EBV)-encoded RNA promotes growth of EBV-infected T cells through interleukin-9 induction. Cancer Res. 2004 Aug 1;64(15):5332-7. PubMed PMID: 15289339.

Pictures:

Precursor- Protein structure and amino acid sequen