

Recombinant Murine Interleukin-9

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. CTK-373
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➤ **Description :**

Interleukin (IL)-9 is known to regulate many cell types involved in T-helper type 2 responses classically associated with asthma, including B- and T-lymphocytes, mast cells, eosinophils and epithelial cells. Growing evidence obtained from human genomic analysis and antigen-challenged transgenic mice suggests that interleukin-9 (IL-9) is a candidate factor in immunoglobulin E (IgE) production and thus is thought to be associated with bronchial inflammation and bronchial hyperresponsiveness (BHR).

➤ **Description :**

Recombinant Mouse IL-9 produced in E.Coli is a single, non-glycosylated single polypeptide chain containing 127 amino acids and having a molecular mass of 14,166 Dalton.

Recombinant Murine IL-9 is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

➤ **Formulation:**

Lyophilized from a concentrated (1mg/ml) solution containing no additives.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized Recombinant IL-9 in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

Lyophilized Murine Interleukin-9 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution rhIL-9 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.

➤ **Purity:**

Greater than 98.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

➤ **Amino acid sequence:**

The sequence of the first five N-terminal amino acids was determined and was found to be Met-Gln-Arg-Cys-Ser.

➤ **Dimers and aggregates:**

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

➤ **Biological Activity:**

This Recombinant Murine IL-9 is fully biologically active when compared to standard. The ED_{50} as determined by the dose-dependent stimulation of human MO7e cells is $< 0.5 \text{ ng/ml}$, corresponding to a Specific Activity of $2 \times 10^6 \text{ IU/mg}$.

➤ **Endotoxin:**

Less than $0.1 \text{ ng}/\mu\text{g}$ (IEU/ μg) of Murine IL-9.

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.6 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).

2. Analysis by RP-HPLC, using a standard solution of IL-9 as a Reference Standard.

➤ **Usage:**

This material is offered for research, laboratory or further manufacturing purposes.

