Recombinant Human Interleukin-9

#R00046

Size: 10 μg/100 μg/500 μg

Stability & 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.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Interleukin-9 (IL-9) is encoded by the IL9 gene and produced by T-cells and specifically by CD4+ helper cells. IL-9 was originally identified as a cytokine found in the conditioned medium of a human T cell leukemia virus type I (HTLVI) transformed T cell line. It functions through the IL-9 receptor, which activates different signal transducer and activator (STAT) proteins and thus connects this cytokine to various biological processes. IL-9 can support the growth of IL-2 independent and IL-4 independent helper T-cells. Human IL-9 has approximately 56 % amino acid sequence identity with murine IL-9. The gene encoding this cytokine has been identified as a candidate gene for asthma. Genetic studies on a mouse model of asthma demonstrated that this cytokine is a determining factor in the pathogenesis of bronchial hyper-responsiveness.

AA Sequence

QGCPTLAGILDINFLINKMQEDPASKCHCSANVTSCL
CLGIPSDNCTRPCFSERLSQMTNTTMQTRYPLIFSRV
KKSVEVLKNNKCPYFSCEQPCNQTTAGNALTFLKSLL
EIFQKEKMRGMRGKI

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	Cytokine P40, T-cell Growth Factor P40
Accession	P15248
GeneID	3578
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 14.1 kDa, a single non-glycosylated polypeptide chain containing 126 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by a cell proliferation assay using human MO7e cells is less than 0.2 ng/ml, corresponding to a

	specific activity of > 5.0 × 10^6 IU/mg.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/μg of rHuIL-9 as determined by LAL method.