Recombinant Human GM-CSF
Granulocyte Macrophage Colony Stimulating Factor
Ultra Pure

Catalog No:  
CRG103A  Size: 2 µg  
CRG103B  Size: 10 µg  
CRG103C  Size: 1.0 mg

Description:  Recombinant human GM-CSF produced in *E.coli* is a single, non-glycosylated, polypeptide chain containing 127 amino acids and having a molecular mass of 14477 Daltons. Recombinant human GM-CSF is purified by proprietary chromatographic techniques.

Source:  *Escherichia coli.*

Appearance:  Sterile filtered white lyophilized (freeze-dried) powder.

Formulation:  The protein was lyophilized after extensive dialysis against 2 mM sodium phosphate buffer pH= 7.4 ± 0.1.

Solubility:  The lyophilized Recombinant human GM-CSF is very soluble in water and most aqueous buffers below and above the isoelectric point (pI=4.95).

Stability:  Lyophilized recombinant human GM-CSF although stable at room temperature, should be stored desiccated below 0°C. Reconstituted Recombinant human GM-CSF is best stored refrigerated at 4°C.

Purity:  Greater than 99.0% as determined by:
- (a) Analysis by RP-HPLC.
- (b) Anion-exchange FPLC.
- (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.

Amino Acid Composition:  In total agreement with the expected amino acid composition of native human GM-CSF.

Amino Acid Sequence:  The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Pro-Ala-Arg-Ser, conforming the sequence of native human GM-CSF. N-terminal methionine has been completely removed enzymatically.

Dimers and Aggregates:  Less than 1% as determined by silver stained SDS-PAGE gel analysis.

Biological Activity:  Recombinant human GM-CSF is fully biologically active when compared to standard. The ED₅₀ as determined by the dose-dependant stimulation of the proliferation of human TF-1 cells (human erythroleukemic indicator cell line) is 0.1 ng/ml, corresponding to a specific activity of 11x10⁶ IU/mg.

Endotoxin:  Less than 0.1 ng/µg (1 EU/µg) of recombinant human GM-CSF.

Protein Content:  Protein quantitation was carried out by two independent methods:

1.  UV spectroscopy at 280 nm using the absorbency value of 0.963 as the extinction coefficient for a 0.1% (1 mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).


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