

Product information



GM-CSF, 18-144 aa, Human, Recombinant, *E.coli*

Cat. No. IBMSF0501

Full name: Granulocyte-macrophage colony stimulating factor

NCBI Accession No.: NP_000749

Synonyms: CSF2, Colony stimulating factor 2, GMCSF

Description: Human GM-CSF is a 14.6 kDa globular protein consisting of 128 amino acid containing two disulfide bonds. GM-CSF is a hematopoietic growth factor that stimulates the development of neutrophils and macrophages and promotes the proliferation and development of early erythroid megakaryocytic and eosinophilic progenitor cells. It is produced in by endothelial cells, monocytes, fibroblasts and T-lymphocytes. GM-CSF inhibits neutrophil migration and enhances the functional activity of the mature end-cells. Recombinant human GM-CSF was expressed in *E.coli* and purified by conventional chromatography, after refolding of the isolated inclusion bodies in a renaturation buffer.

Form: Liquid in phosphate-buffered saline (pH 7.4)

Molecular Weight: 14.6 kDa (128 aa), confirmed by MALDI-TOF

Purity: > 95% by SDS - PAGE

Concentration: 1 mg/ml (determined by Bradford assay)

Endotoxin Level: < 1.0 EU per 1 µg of protein (determined by LAL method)

Biological activity: The ED50 for this effect is < 0.18 ng/ml. Measured in a cell proliferation assay using TF1 human erythroleukemic cells.

kDa

57

40

28

18

8.5

15% SDS-PAGE (3µg)

Activity Assay

1. Cell line: TF1 (human erythroleukemic cell)
2. maintenance Condition: 10% FBS RPMI 1640 with GM-CSF
3. Assay medium - 10% FBS RPMI 1640 without Gm-CSF
4. Cell density: 2×10^4 cells/well (96 well plate, final volume 100ul)
starvation : 24hr, Assay medium
5. Incubation time : 24 hr (after sample treatment)
6. Concentration range: 0.048 ng/ml - 25 ng/ml
7. Detection method : MTT assay

Sequences of amino acids:

MAPARSPSPS TQPWEHVNAI QEARRLLNLS RDTAAEMNET VEVISEMFDL QEPTCLQTRL ELYKQGLRGS LTKLKGPLTM MASHYKQHCP
PTPETSCATQ IITFESFKEN LKDFLLVIPF DCWEPVQE

General references:

Trapnell BC, *et al.* (2002) *Annu Rev Physiol.* 64, 775-80

Wong GG, *et al.* (1985) *Science*, 228, 810-815

Storage: Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles

For research use only. This product is not intended or approved for human, diagnostics or veterinary use.



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