Product No. I-7764
Interleukin-6 (IL-6)
Human, Recombinant
Expressed in *E. coli*

Description

Interleukin 6 (IL-6) is a multifunctional 26 kD protein originally discovered in the media of RNA-stimulated fibroblastoid cells.[1] Interleukin-6 appears to be directly involved in the responses that occur after infection and injury, it may prove to be as important as IL-1 and TNF-α in regulating the acute phase response.[2,3] IL-6 is reported to be produced by fibroblasts, activated T cells, activated monocytes or macrophages and endothelial cells. It acts upon a variety of cells including fibroblasts, myeloid progenitor cells, T cells, B cells and hepatocytes.[3] Interleukin-6 induces multiple effects as indicated by its numerous synonyms: plasmacytoma growth factor (PCT-GF), interferon-β-2 (IFN-β_2), monocyte derived human B cell growth factor, B cell stimulating factor (BSF-2), hepatocyte stimulating factor (HSF), Interleukin Hybridoma/Plasmacytoma-1 (IL-HP1). In addition, IL-6 appears to interact with IL-2 in the proliferation of T-lymphocytes.[4] IL-6 also potentiates the proliferative effect of IL-3 on multipotential hematopoietic progenitors.[5]

Performance Characteristics

This product is tested in mouse cells (T1165) measuring thymidine (^{3}H) incorportation in a proliferation assay.[4] Activity is expressed in Reference Units (NIBSC reference preparation for IL-6 code 88/514).
The recommended concentration range for IL-6 is 2 - 125 Reference Units/ml. The EC_{50} is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Product Information

Expressed in *E. coli*
Molecular Weight: 26 kD
Purity: ≥98% SDS-PAGE
Activity: 7,500 - 15,000 Reference Units/vial
Package Size: 2 µg
Volume/vial: 1 ml
Diluent: Phosphate buffered saline (PBS)
Carrier Protein: 0.1% BSA
Sterility: Negative for bacteria, yeast and fungi.
Endotoxin: <10 EU/ml.

Dilution and Use

The contents of the vial may be further diluted in buffered saline or tissue culture media containing 0.1-1.0 % BSA or 1-10% serum, according to the planned application. If aseptic technique is used, additional filtration should not be necessary and should be avoided due to possible adsorption onto the filter membrane.

Storage

Store at −70°C. Repeated freezing and thawing is **not** recommended.

References

1. Billiau, Immunol. Today, **8**, 84 (1987).
2. Gauldie, et al., Proc. Natl. Acad. Sci. USA, **84**, 7251 (1987).
3. Van Snick, J., Annu., Rev. Immunol., **8**, 253 (1990).
4. Nordan, R. and Potter, M., Science, **233**, 566 (1986).
5. Van Snick, J., et al., Proc. Nat. Acad. Sci. USA, **83**, 9679 (1986).