PA1081X

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Rat Interleukin-6 (IL-6) - Purified

Alternate names: BSF-2, BSF2, CDF, HGF, HSF, IFNB2, IL6, Interferon beta-2, Interleukin 6, MGI-2A

Catalog No.: PA1081X

Quantity: 10 µg

Concentration: 1 mg/ml (prior to lyophil.)

Background: Interleukin-6 is a potent pro-inflammatory cytokine primarily produced by activated T cells and an assortment of other cells including endothelial cells and macrophages. IL-6 affects B and T lymphocytes and has been shown to have a role in host defense, acute phase reactions, immune responses and hematopoiesis.

Species: Rat

Source: E. coli

Format: **State:** Lyophilized
Purity: ›95% Purified by proprietary chromatographic techniques, sterile filtered, purity › 95.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.
Reconstitution: 100 mM acetic acid to 1.0 mg/mL, incubated for 30 minutes at room temperature to regain full activity, which can then be further diluted to other aqueous solutions.

Description: Interleukin-6 Rat Recombinant is a single, non-glycosylated polypeptide chain containing 187 amino acids.
AA Sequence:
`The sequence of the first five N-terminal amino acids was determined and was found to be Met-Phe-Pro-Thr-Ser.`
Biological Activity: The ED50= 0.03-0.1 ng/mL. The biological activity is determined by measuring the dose-dependant proliferation of IL-6 dependent B9 cells. A concentration range of 0.1 to 10.0 ng/mL is effective for most in vitro applications.
Molecular weight: 22 kDa 21732 Dalton.

Add. Information: Protein quantitation was carried out by two independent methods:
1. UV spectroscopy at 280 nm using the absorbency value of 0.55 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-6 as a Reference Standard.

Storage: Lyophilized product is stable at room temperature for one month, should be stored desiccated below -20 °C. Upon reconstitution it should be stored at 2 - 8 °C up to one week and for future use below -20 °C. For long term storage it is recommended to add a carrier protein (0.1 % HSA or BSA). Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Saijo Y, Yoshioka E, Fukui T, Kawaharada M, Sata F, Sato H, et al. Effects of the Interaction between Interleukin-6 -634C/G Polymorphism and Smoking on Serum C-Reactive Protein Concentrations. Hypertens Res. 2007 Jul;30(7):593-9. PubMed PMID: 17785926.
2. Are promoter polymorphisms of interleukin 6 ready to be applied in genetic markers of cardiovascular diseases? Hypertens Res 2007 Jul;30(7):575-6
3. Gealy C, Humphreys C, Dickinson V, Stinski M, Caswell R. An activation-defective mutant of the human cytomegalovirus IE2p86 protein inhibits NF-kappaB-mediated stimulation of the human interleukin-6 promoter. J Gen Virol. 2007 Sep;88(Pt 9):2435-40. PubMed PMID: 17698652.
4. Kobayashi K, Yokote T, Akioka T, Hara S, Oka S, Hiraoka N, et al. [Vascular endothelial growth factor and interleukin 6 production by Hodgkin lymphoma]. Gan To Kagaku Ryoho. 2007 Aug;34(8):1327-30. PubMed PMID: 17687225.
5. Dubiński A, Zdrojewicz Z. [The role of interleukin-6 in development and progression of atherosclerosis]. Pol Merkur Lekarski. 2007 Apr;22(130):291-4. PubMed PMID: 17684929.
6. Mukamal KJ, Jenny NS, Tracy RP, Siscovick DS. Alcohol consumption, interleukin-6 and apolipoprotein E genotypes, and concentrations of interleukin-6 and serum amyloid P in older adults. Am J Clin Nutr. 2007 Aug;86(2):444-50. PubMed PMID: 17684217.

Pictures:

Precursor- Protein structure and amino acid sequence