

Mouse IL-6 Recombinant Protein

Product Information

Product No.: I-208

Storage: 2 to 8 °C

Product Description

Background:

IL-6 is a pleiotropic 26 kD protein that can act as both a pro-inflammatory cytokine and an anti-inflammatory myokine, a form of cytokine produced in muscle cells that participates in tissue regeneration and repair, maintenance of healthy bodily functioning, and homeostasis within the immune system. IL-6 plays a part in the immune, endocrine, nervous, and hematopoietic systems, in addition to bone metabolism, regulation of blood pressure and inflammation. Osteoblasts secrete IL-6 to stimulate osteoclast formation. Smooth muscle cells in the tunica media of many blood vessels also produce IL-6 as a pro-inflammatory cytokine. Furthermore, IL-6 is an important mediator of fever and of the acute phase response which is the body's rapid attempt to restore homeostasis after tissue injury, infection, neoplastic growth, or immunological disturbance. In addition, IL-6 can be released into circulation in response to various stimuli including PAMPs (pathogen-associated molecular patterns) and cortisol, a hormone produced by the human body under psychologically stressful conditions. In its role as an anti-inflammatory myokine, IL-6 precedes the appearance of other cytokines in the circulation, is notably elevated with exercise, and is mediated by both its inhibitory effects on TNF- α and IL-1, and activation of IL-1ra and IL-10. IL-6 signals through a cell-surface type I cytokine receptor complex formed by the binding of IL-6 to IL-6R, forming a binary complex, which in turn combines with GP130 to transduce extracellular signaling by the activation STAT3. Hence, it is thought that blocking the interaction between IL-6 and GP130 may have therapeutic potential via the inhibition of the IL-6/GP130/STAT3 signaling pathway. Moreover, IL-6 initiates the inflammatory and auto-immune processes in many diseases such as diabetes, atherosclerosis, depression, Alzheimer's disease, rheumatoid arthritis, cancer, and various others. Thus, there is an interest in the therapeutic potential of anti-IL-6 mAbs.

Known Reactivity Species:

Mouse

Expression Host:

E. coli Cells

Formulation

This recombinant protein was 0.2 μ m filtered and is supplied in a solution of 50 mM sodium acetate (NaOAc) and EDTA.

Purity

>97% by SDS-PAGE and analyzed by silver stain.

Endotoxin

<0.1 EU/ μ g as determined by the LAL method

Storage and Stability

This protein is stable six (6) to twelve (12) months when stored at 2°C to 8°C. Do not Freeze This Product.

Country of Origin

USA

References

- 1) Febbraio, MA. and Pedersen, BK. (2005) Exerc Sport Sci Rev. 33(3):114-9.
- 2) Baier, M. et al. (1997) Proc Natl Acad Sci U S A. 94(10):5273-7.