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Human IL-6 Recombinant Protein

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#48333

20 µg

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
21	#P05231	3569

Background

Acute phase response is induced by interleukin-6 (IL-6) produced by T cells, macrophages, fibroblasts, endothelial and other cells (1,2). IL-6 induces proliferation or differentiation in many cell types including B cells, thymocytes and T cells. IL-6, in concert with TGF-β, is important for developing Th17 responses. IL-6 binds to IL-6Rα and through this association induces gp130 homodimerization (1). gp130 homodimerization triggers the Jak/Stat cascade and the SHP-2/Erk MAP kinase cascade (1,3,4). IL-6 also forms a complex with an IL-6Rα splice variant that is non-membrane-associated (3). The IL-6/soluble IL-6Rα complex can then activate the gp130 signaling pathway in cells that express gp130 but not IL-6Rα (3). Research studies have shown that IL-6, through increasing expression of proangiogenic VEGF, may also contribute to metastatic breast cancer (5).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg hIL-6.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human IL-6 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hIL-6 was determined in a B9 cell proliferation assay. The ED_{50} of each lot is less than or equal to 25 pg/ml.

Background References

1. Heinrich, P.C. et al. (1998) *Biochem J* 334 (Pt 2), 297-314.
2. Heinrich, P.C. et al. (1998) *Z Ernahrungswiss* 37 Suppl 1, 43-9.
3. Jones, S.A. (2005) *J Immunol* 175, 3463-8.
4. Jenkins, B.J. et al. (2004) *Mol Cell Biol* 24, 1453-63.
5. Hong, D.S. et al. (2007) *Cancer* 110, 1911-28.

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Limited Uses