Revision 5

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#5216

Mouse Interleukin-6 (mIL-6)

Cell Signaling TECHNOLOGY®

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
26-36	#P08505	16193

Background

IL-6 is a potent inducer of the acute phase response and is produced by T cells, macrophages, fibroblasts, endothelial, and other cells (1,2). IL-6 induces proliferation and differentiation and acts on B cells, T cells, thymocytes, and others. IL-6 in concert with TGFβ 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 SHP2/MAPK (Erk) 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 on cells that express gp130 but not IL-6Rα (3). IL-6, through increasing expression of proangiogenic VEGF, may contribute to metastatic breast cancer (5).

Endotoxin

Less than 0.01 ng endotoxin/1 µg mIL-6.

Purity

>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant mIL-6. All lots are greater than 98% pure.

Source / Purification

Recombinant mouse IL-6 (mIL-6) Phe25-Thr211 (Accession #NP_112445) was expressed in human 293 cells at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant mIL-6 was determined in a B9 cell proliferation assay. The ED_{50} of each lot is between 0.5 and 20 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.

Trademarks and Patents

Limited Uses