Revision 3

#12786 Store at -20C

Human Interleukin-6 Receptor α (hIL-6Rα)

10 µg

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

MW (kDa):	UniProt ID:	Entrez-Gene Id:
38	#P08887	3570

Background

The IL-6 receptor is a heterodimeric complex that consists of a ligand-binding IL-6 receptor α (IL-6Rα) subunit and a signaling component, gp130 (1). Binding of IL-6 to IL-6Rα results in dimerization of receptor with gp130 and subsequent STAT3 activation (1). IL-6Rα is cleaved from the cell surface by ADAM17 (1,2). In humans, soluble IL-6Rα is also generated via alternatively spliced mRNA (1,3). Soluble IL-6Rα binds to IL-6 and can stimulate signaling via membrane bound gp130 in a process known as “trans-signaling” (1). It is through trans-signaling that IL-6 stimulates cells that do not express membrane bound IL-6Rα (1).

Endotoxin

Less than 0.01 ng endotoxin/1 µg hIL-6Rα.

Purity

>90% as determined by SDS-PAGE of 6 µg reduced (+) and nonreduced (-) recombinant hIL-6Rα. All lots are greater than 90% pure.

Source / Purification

Recombinant Human Interleukin-6 Receptor α (hIL-6Rα) Leu20 - Asp358 (Accession #NP_000556) was expressed in human 293 cells at Cell Signaling Technology.

Bioactivity

The activity of hIL-6Rα was determined by assessing its ability to enhance IL-6 mediated inhibition of M1 cells proliferation. The ED_{50} of each lot is between 2 and 15 ng/ml.

Background

The IL-6 receptor is a heterodimeric complex that consists of a ligand-binding IL-6 receptor α (IL-6Rα) subunit and a signaling component, gp130 (1). Binding of IL-6 to IL-6Rα results in dimerization of receptor with gp130 and subsequent STAT3 activation (1). IL-6Rα is cleaved from the cell surface by ADAM17 (1,2). In humans, soluble IL-6Rα is also generated via alternatively spliced mRNA (1,3). Soluble IL-6Rα binds to IL-6 and can stimulate signaling via membrane bound gp130 in a process known as “trans-signaling” (1). It is through trans-signaling that IL-6 stimulates cells that do not express membrane bound IL-6Rα (1).

Background References

1. Rose-John, S. (2012) *Int J Biol Sci* 8, 1237-47.
2. Müllberg, J. et al. (1993) *Eur J Immunol* 23, 473-80.
3. Lust, J.A. et al. (1992) *Cytokine* 4, 96-100.

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Limited Uses

other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.