

Human Interleukin-22 (hIL-22)



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MW (kDa):
34

UniProt ID:
#Q9GZX6

Entrez-Gene Id:
50616

Background

IL-22, a member of the IL-10 family (1,2), is expressed by Th17 CD4+ T cells, activated T cells, Th1 cells and NK cells (3). IL-22 induces proinflammatory responses, drives production of antimicrobial peptides, and is involved in tissue-repair and wound-healing responses (1). The IL-22 receptor is a heterodimer of IL-22R1 and IL-10R2 (4). Expression of IL-22R is restricted to tissue-resident cells, particularly those of epithelial origin, whereas the IL-10R2 chain is expressed in many more cell types. IL-22 induces phosphorylation of Jak1 and Tyk2, leading to activation of Stat3 and, to a lesser extent, Stat1 and Stat5 (1). IL-22 responses can involve activation of the MEK-ERK-RSK, JNK-SAPK, and p38 pathways (1). Elevated levels of IL-22 have been associated with Crohn's disease and rheumatoid arthritis. IL-22 plays an essential role in host response to the pulmonary pathogen *Klebsiella pneumoniae* (5).

Endotoxin

Less than 0.01 ng endotoxin/1µg hIL-22.

Purity

>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hIL-22. All lots are greater than 98% pure.

Source / Purification

Recombinant human IL-22 (hIL-22) Ala34-Ile179 (Accession #NP_065386) was expressed in human 293 cells at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant IL-22 was determined by its ability to induce IL-10 production by COLO 205 cells. The ED₅₀ of each lot is between 100-300 pg/ml.

Background References

1. Ouyang, W. et al. (2008) *Immunity* 28, 454-67.
2. Dumoutier, L. et al. (2000) *Proc Natl Acad Sci U S A* 97, 10144-9.
3. Takatori, H. et al. (2008) *Mod Rheumatol* 18, 533-41.
4. Nagalakshmi, M.L. et al. (2004) *Int Immunopharmacol* 4, 679-91.
5. Aujla, S.J. et al. (2008) *Nat Med* 14, 275-81.

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