

Store at
-20C

#74808

Human IL-22 Recombinant Protein

10 µg

**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):**
33.8**UniProt ID:**
#Q9GZX6**Entrez-Gene Id:**
50616

Background

Interleukin-22 (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

Endotoxin levels are less than or equal to 1 EU / 1 µg hIL-22.

Purity

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

Source / Purification

Recombinant human IL-22 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hIL-22 was determined by measuring the production of IL-10 from Colo 205 cells. The ED₅₀ of each lot is less than or equal to 0.3 ng/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.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with 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.

