

Store at  
-20°C

# Mouse IL-22 Recombinant Protein

Cell Signaling  
TECHNOLOGY®

#58269

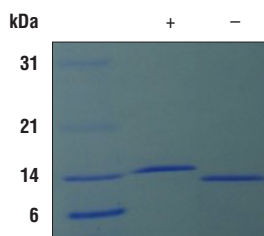
10 µg

New 02/21

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orders@cellsignal.comEntrez-Gene ID #50929  
UniProt ID #Q9JJY9

## For Research Use Only. Not For Use In Diagnostic Procedures.

**Background:** Interleukin-22 (IL-22), a member of the IL-10 family (1,2), is expressed by Th17 CD4<sup>+</sup> T cells, activated T cells, Th1 cells, and NK cells (3). Expression of IL-22 in combination with a select group of cytokines defines a subset of Th cells (4). 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 (5). 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* (6).

**Molecular Weight:** 16.8 kDa**Endotoxin:** Endotoxin levels are  $\leq$  1 EU / 1 µg mL-22.**Purity:**  $\geq$  95% purity was determined by SDS-PAGE.**Source/Purification:** Recombinant mouse IL-22 was expressed in *E. coli* and is supplied in a lyophilized form.**Bioactivity:** The bioactivity of recombinant mL-22 was determined by measuring the production of IL-10 from human Colo 205 cells. The ED<sub>50</sub> of each lot is  $\leq$  1 ng/ml.

The purity of Mouse IL-22 Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant mL-22 and staining with Coomassie Blue.

**Storage:** Mouse IL-22 Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

**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) Eyerich, S. et al. (2009) *J Clin Invest* 119, 3573-85.
- (5) Nagalakshmi, M.L. et al. (2004) *Int Immunopharmacol* 4, 679-91.
- (6) Aujla, S.J. et al. (2008) *Nat Med* 14, 275-81.

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**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.