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#58269**Mouse IL-22 Recombinant Protein**

10 µg


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**For Research Use Only. Not for Use in Diagnostic Procedures.**
**MW (kDa):**  
16.8

**UniProt ID:**  
#Q9JJY9

**Entrez-Gene Id:**  
50929
**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).

**Endotoxin**

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

**Purity**

A greater than or equal to 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 mIL-22 was determined by measuring the production of IL-10 from human Colo 205 cells. The ED<sub>50</sub> of each lot is less than or equal to 1 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. 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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