

Store at  
-20C  
#76561

# Mouse IL-11 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):**  
19.3**UniProt ID:**  
#P47873**Entrez-Gene Id:**  
16156

## Background

Interleukin-11 (IL-11) was initially cloned as a mediator of plasmacytoma cell proliferation and was later found to exhibit a wide variety of biological effects in neural cells as well as in the hematopoietic and immune systems (1). IL-11 belongs to the interleukin-6 (IL-6)-type subfamily of long-chain helical cytokines, including IL-6, ciliary neurotrophic factor (CNTF), leukemia inhibitory factor (LIF), oncostatin M, and cardiotrophin-1, which all share the glycoprotein gp130 as a signal transducing receptor component. IL-11 acts on cells expressing gp130 and the IL-11 receptor (IL-11R)  $\alpha$  subunit. Both receptor subunits belong to the family of class I cytokine receptors. The complex of IL-11 and IL-11R triggers the activation of gp130 most likely by enforcing gp130 homodimerization (2). As a consequence of gp130 activation, several cytoplasmic signal transduction cascades are initiated from the Janus kinase (Jak)/signal transducer and activator of transcription (Stat) pathway, which has attracted considerable attention. Initiation of the Jak/Stat pathway in response to IL-11 requires Jak1 and leads predominantly to the activation of Stat3 (3,4).

## Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg mL-11.

## Purity

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

## Source / Purification

Recombinant mouse IL-11 was expressed in *E. coli* and is supplied in a lyophilized form.

## Bioactivity

The bioactivity of recombinant mL-11 was determined in a B9 cell proliferation assay. The ED<sub>50</sub> of each lot is less than or equal to 250 ng/ml.

## Background References

1. Du, X. and Williams, D.A. (1997) *Blood* 89, 3897-908.
2. Tacke, I. et al. (1999) *Eur J Biochem* 265, 645-55.
3. Dahmen, H. et al. (1998) *Biochem J* 331 (Pt 3), 695-702.
4. Kiessling, S. et al. (2004) *J Biol Chem* 279, 10304-15.

## 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](http://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.

