

# Mouse Interleukin-10 (mIL-10)

- |   |   |
|---|---|
| <input type="checkbox"/> SC 10 µg<br>(With Carrier) | <input type="checkbox"/> SF 10 µg<br>(Carrier Free) |
| <input type="checkbox"/> LC 50 µg<br>(With Carrier) | <input type="checkbox"/> LF 50 µg<br>(Carrier Free) |

Multi-milligram quantities available

New 03/11



Cell Signaling  
TECHNOLOGY®

- Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com
- Support** ■ 877-678-TECH (8324)  
info@cellsignal.com
- Web** ■ www.cellsignal.com

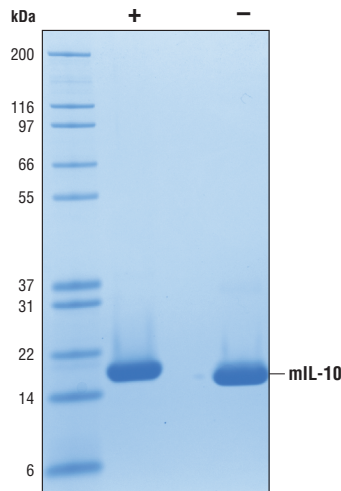
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

**Source:** Recombinant mouse IL-10 (mIL-10) Ser19 - Ser178 (Accession # NP\_034678) was produced in *E. coli* at Cell Signaling Technology.

**Molecular Characterization:** Recombinant mIL-10 does not have a Met on the amino terminus and has a calculated MW of 18,976. DTT-reduced and non-reduced protein migrate as 19 kDa polypeptides. The expected amino-terminal SRGQY of recombinant mIL-10 was verified by amino acid sequencing.

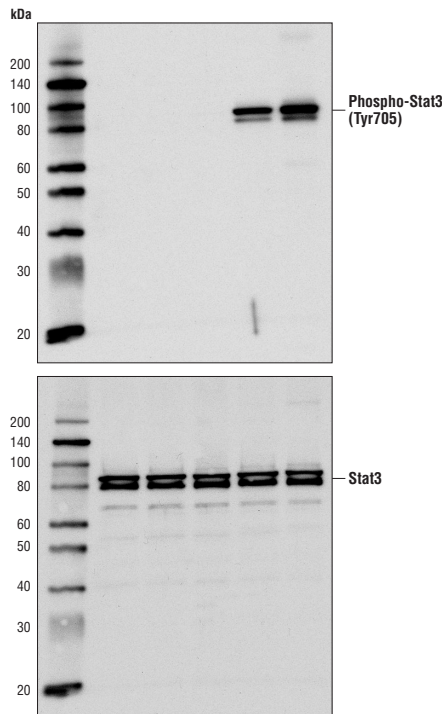
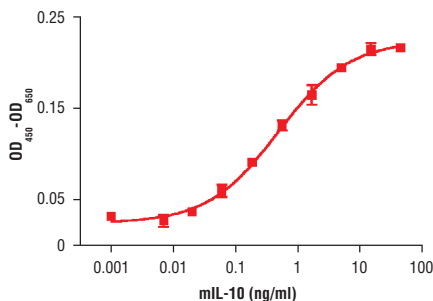
**Endotoxin:** Less than 0.01 ng endotoxin/1 µg mIL-10.

**Purity:** >98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant mIL-10. All lots are greater than 98% pure.



The purity of recombinant mIL-10 was determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant mIL-10 and staining overnight with Coomassie Blue.

**Bioactivity:** The bioactivity of recombinant mIL-10 was determined in a MC/9 cell proliferation assay. The ED<sub>50</sub> of each lot is between 0.3-1.3 ng/ml.



Western blot analysis of extracts from MC/9 cells, untreated or treated with mIL-10 for 20 minutes, using Phospho-Stat3 (Tyr705) (D3A7) XP™ Rabbit mAb #9145 (upper) or Stat3 Antibody #9132 (lower).

◀ The proliferation of MC/9 cells treated with increasing concentrations of mIL-10 in the presence of 1 pg/ml mouse IL-4 (#5208) was assessed. After 72 hour treatment with mIL-10 cells were incubated with a tetrazolium salt and the OD<sub>450</sub>-OD<sub>660</sub> was determined.

**Formulation:** With carrier: A 0.22 µm filtered solution of 0.33 mg/ml mIL-10 in PBS, pH 7.2 containing 20 µg BSA per 1 µg mIL-10. Carrier free: A 0.22 µm filtered solution of 0.33 mg/ml mIL-10 in PBS, pH 7.2.

**Storage:** Stable at 4°C for 1 year after receipt. *Maintain sterility. Do not store frozen.*

**Applications:** Optimal concentration for the desired application should be determined by the user.

**Background:** IL-10 is an anti-inflammatory cytokine that is produced by T cells, NK cells, and macrophages (1,2). IL-10 initiates signal transduction by binding to a cell surface receptor complex consisting of IL-10 RI and IL-10 RII (1). Binding of IL-10 leads to the activation of Jak1 and Tyk2, which phosphorylates Stat3 (1,3). The anti-inflammatory activity of IL-10 is due to its ability to block signaling through other cytokine receptors, notably IFN $\gamma$  receptor, by upregulating expression of SOCS1 (1,3). In addition, IL-10 promotes T cell tolerance by inhibiting tyrosine phosphorylation of CD28 (4,5). IL-10 is an important negative regulator of the immune response, which allows for maintenance of pregnancy (1). In contrast, increased IL-10 levels contribute to persistent *Leishmania major* infections (6).

#### Background References:

- (1) Pestka, S. et al. (2004) *Immunol Rev* 202, 8-32.
- (2) Akuffo, H. et al. (1999) *Clin Exp Immunol* 117, 529-34.
- (3) O'Shea, J.J. and Murray, P.J. (2008) *Immunity* 28, 477-87.
- (4) Akdis, C.A. and Blaser, K. (2001) *Immunology* 103, 131-6.
- (5) Akdis, C.A. et al. (2000) *FASEB J* 14, 1666-8.
- (6) Von Stebut, E. *Eur J Dermatol* 17, 115-22.