

Store at
-20°C

Human IL-15 Recombinant Protein

Cell Signaling
TECHNOLOGY®

#50425

10 µg

New 12/20

Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/supportOrders: 877-616-2355 (U.S.)
orders@cellsignal.comEntrez-Gene ID #3600
UniProt ID #P40933

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

Background: Interleukin-15 (IL-15) is a pleiotropic cytokine best known for inducing T cell proliferation and NK cell proliferation and activation (1,2). This glycoprotein is a member of the 4 α -helix-bundle family of cytokines and is required for the differentiation of effector CD8⁺ and memory phenotype CD8⁺ T cells (3,4). The effects of IL-15 are mediated through the heterotrimeric receptor consisting of the IL-15 receptor alpha (IL-15R α), the β -chain, and the common γ -chain (2). The β -chain and common γ -chain are shared with the IL-2 receptor (3). Binding of IL-15 initiates signaling cascades that involve Jak1, Jak3, Stat3, and Stat5, leading to activation of the PI3K/Akt and Ras/Raf/MAPK signaling pathways (5). The effect that IL-15 has on innate and specific immunity makes it an important target for cancer immunotherapy and viral clearance (3,6).

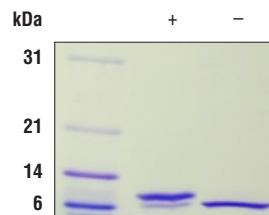
Molecular Weight: 12 kDa

Endotoxin: Endotoxin levels are ≤ 1 EU / 1 µg hIL-15.

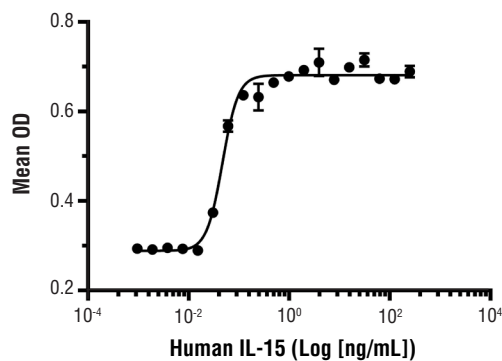
Purity: $\geq 95\%$ purity was determined by SDS-PAGE.

Source/Purification: Recombinant human IL-15 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity: The bioactivity of recombinant hIL-15 was determined in a CTLL-2 cell proliferation assay. The ED₅₀ of each lot is ≤ 5 ng/ml.



The purity of Human IL-15 Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant hIL-15 and staining with Coomassie Blue.



Serial dilutions of Human IL-15 Recombinant Protein were added to CTLL-2 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED₅₀.

Storage: Human IL-15 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) Ma, A. et al. (2006) *Annu Rev Immunol* 24, 657-79.
- (2) Perera, P.Y. et al. (2012) *Microbes Infect* 14, 247-61.
- (3) Steel, J.C. et al. (2012) *Trends Pharmacol Sci* 33, 35-41.
- (4) Perera, L.P. (2000) *Arch Immunol Ther Exp (Warsz)* 48, 457-64.
- (5) Budagian, V. et al. (2006) *Cytokine Growth Factor Rev* 17, 259-80.
- (6) Kandikattu, H.K. et al. (2020) *Cytokine Growth Factor Rev*, 54:24-31.

Thank you for your recent purchase. If you would like to provide a review visit cellsignal.com/comments.

www.cellsignal.com

© 2020 Cell Signaling Technology, Inc.

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

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.