

# Cytokines

## Human Recombinant IL-34

Interleukin 34, His tag



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Catalog #100-0930  
100-0931

100 µg  
1000 µg

## Product Description

Interleukin 34 (IL-34) is well known for its ability to induce the formation of colony-forming unit macrophages in human bone marrow cell cultures (Foucher et al.; Wei et al.). This dimeric glycoprotein is a member of the short-chain helical hematopoietic cytokine family (Baghdadi et al.; Foucher et al.), and exists in two isoforms that differ by a single glutamine (Chen et al.; Foucher et al.; Wei et al.). IL-34 interacts with M-CSF to trigger tyrosine phosphorylation of the receptor and ERK1/2 pathways. (Wang et al.; Wei et al.). It is expressed in many tissues (heart, brain, lung, liver, kidney, thymus, testes, ovary, small intestine, prostate, and colon), with the highest expression in the spleen. In combination with RANKL (Catalog #78214), IL-34 induces osteoclast differentiation (Chen et al.; Foucher et al.). IL-34 expression is decreased in Alzheimer's disease and atopic dermatitis, while high levels of IL-34 are found in many types of cancer correlated with poor prognosis, chronic heart failure or coronary artery disease, inflammatory bowel disease, influenza A infection, during acute liver transplant rejection or in non-alcoholic fatty liver disease, and with rheumatoid arthritis (Baghdadi et al.). It is therefore a possible pharmacological target for treating bone or inflammatory diseases (Chen et al.). This protein contains a His-residue tag at the carboxyl end of the polypeptide chain, and the protein was purified as a homodimer consisting of 39 kDa monomers (Lin et al.).

## Product Information

**Alternative Names:** C16orf77, IL-34, IL34, Interleukin 34

**Accession Number:** AAH29804.1 (Asn21-Ala243) was expressed with a polyhistidine tag at the C-terminus

**Amino Acid Sequence:** NEPLEMWPLT QNEECTVTGF LRDKLYRSLR LQYMKHYFPI NYKISVPYEG VFRIANVTRL QRAQVSEREL RYLWVLVSLA ATESVQDVLL EGHPSWKYLQ EVQTLLLNQV QGLTDVEVSP KVESVLSLLN APGPNLKLVR PKALLDNCFR VMELLYCSCC KQSSVLNWQD CEVPSQSCS PEPSLQYAAT QLYPPPPWSP SSPPHSTGVS RPVRAQGEGE LPAHHHHHHH HHH

**Predicted Molecular Mass:** 26.7 kDa

**Species:** Human

**Formulation:** Lyophilized from sterile PBS, pH 7.4. Trehalose (5% - 8%), mannitol, and 0.01% TWEEN® 80 are normally added as protectants before lyophilization.

**Source:** CHO

## Specifications

**Activity:** The EC50 of Human Recombinant IL-34 is 2 - 8 ng/mL as determined by a cell proliferation assay using human peripheral blood mononuclear cells (PBMCs).

**Purity:** ≥ 92%

**Endotoxin Level:** Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1.0 EU/µg protein.

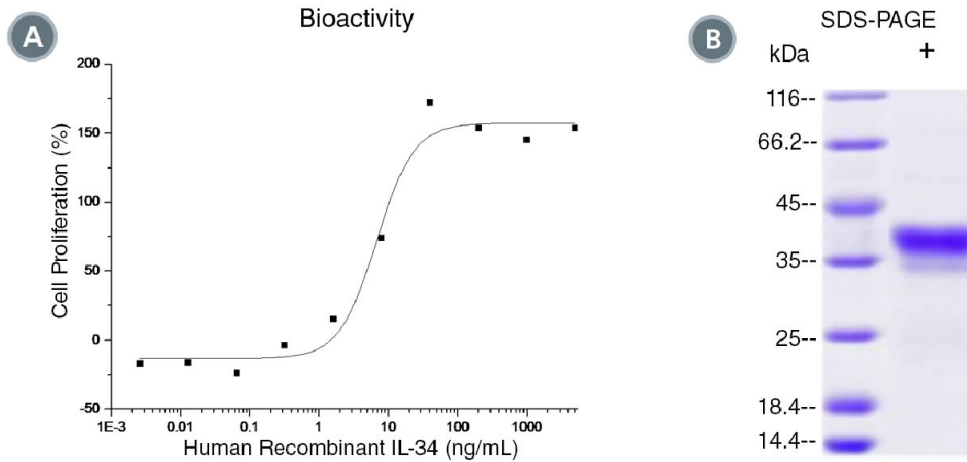
## Preparation and Storage

**Storage:** Store at -20°C to -80°C.

**Stability:** Stable as supplied for 12 months from date of receipt.

**Preparation:** Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

## Data



(A) The biological activity of Human Recombinant IL-34 was tested by its ability to promote the proliferation of human PBMCs. The EC<sub>50</sub> is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC<sub>50</sub> in the above example is 2 - 8 ng/mL.

(B) Human Recombinant IL-34 was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-34 has a predicted molecular mass of 39 kDa (Lin et al).

## Related Products

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## References

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