Technical Data Sheet

Recombinant human IL-34 protein

bioxcell.com

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

Lot Specific Information

Lot Number: **Lot Specific***

Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Information

Catalog Number:	**RP088**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Polarization of anti-inflammatory or M2 macrophage Generation of iPSC-derived microglia and Langerhans cells Osteoclast culture to study osteoporosis and bone disorders
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in sterile-filtered water at >50 µg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	25 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human IL-34 protein (interleukin-34) is a dimeric four-helix bundle cytokine, natively 241 amino acids and 39 kDa, that regulates the differentiation, survival and activation of monocytes, macrophages and osteoclasts. Produced mainly by keratinocytes and neurons, as well as fibroblasts, endothelial cells and certain immune cells, IL-34 was identified in 2008 as a ligand for colony-stimulating factor 1 receptor (CSF-1R), which it shares with M-CSF (CSF-1) despite distinct expression patterns. IL-34 is key to the development and maintenance of tissue-resident macrophages such as Langerhans cells and microglia and induces differentiation of monocytes into immunosuppressive M2 macrophages. Its dysregulation is implicated in rheumatoid arthritis, multiple sclerosis, Alzheimer's and Parkinson's disease and cancers such as colorectal cancer and hepatocarcinoma, where it recruits tumor-associated macrophages. In vitro, IL-34 is used to differentiate, activate and polarize bone marrow-derived monocytes into macrophages, to maintain and differentiate human iPSCs into microglia, to promote osteoclast differentiation for bone resorption studies and to study cancer cell proliferation and migration, making it a key reagent for immunology, neuroscience and bone research. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. A GMP-grade version of this protein is available for cell and gene therapy manufacturing. Contact us at customerservice@bioxcell.com for details. Species reactivity: human. Species similarity: mouse - 71%, rat - 72%, bovine - 78%, porcine - 75%.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at

https://bioxcell.com/faqs.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

Bio X Cell, LLC
https://bioxcell.com
+1-866-787-3444
customerservice@bioxcell.com

Conditions: For research use only. Not for use in diagnostic or therapeutic procedures.
Not for resale.
Bio X Cell, Bio X Cell logo, and all other trademarks are the property of Bio X Cell, LLC © Bio X Cell, LLC