# biotechne

## **Recombinant Human IL-34 His-tag**

Catalog Number: 11449-IL

**R**DSYSTEMS

DESCRIPTION	
Source	Chinese Hamster Ovary cell line, CHO-derived human IL-34 protein Asn21-Val193, with a C-terminal 6-His tag Accession # AAH29804.1
N-terminal Sequence Analysis	Asn21
Predicted Molecular Mass	21 kDa

SPECIFICATIONS	
SDS-PAGE	19-25 kDa, under reducing conditions.
Activity	Measured by its ability to induce CCL2/MCP-1 secretion by human peripheral blood mononuclear cells (PBMC). The ED <sub>50</sub> for this effect is 15.0-150 ng/mL.
Endotoxin Level	<0.10 EU per 1 $\mu$ g of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE	
Reconstitution	Reconstitute the 10 $\mu$ g size at 100 $\mu$ g/mL in PBS. Reconstitute all other sizes at 500 $\mu$ g/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
	<ul> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> </ul>
	<ul> <li>1 month. 2 to 8 °C under sterile conditions after reconstitution.</li> </ul>



#### BACKGROUND

Interleukin 34 (IL-34; also known as uncharacterized protein C16orf77) is secreted as a homodimer consisting of 39 kDa monomers (1). It belongs to no known cytokine family. Human IL-34 is synthesized as a 242 amino acid (aa) precursor that contains a 20 aa signal sequence and a 222 aa mature chain. The mature chain contains one potential site of N-linked glycosylation. Human IL-34 is 71% identical to mouse IL-34 on the amino acid level (1). IL-34 is expressed in various tissues, including the heart, brain, liver, kidney, spleen, thymus, testes, ovary, small intestine, prostate, and colon, and is most abundant in the spleen (1). The receptor for IL-34 is colony-stimulating factor 1 receptor (CSF-1R) (1). IL-34 stimulates monocyte proliferation (1). In functional studies, IL-34, like CSF-1, the other ligand for CSF-1R, stimulated phosphorylation of extracellular signal-regulated kinase-1 and -2 (ERK1/2) in human monocytes (1). In addition, IL-34 promoted the formation of the colony-forming unit-macrophage (CFU-M), a macrophage progenitor, in human bone marrow cultures (1).

#### References:

1. Lin, H. et al. (2008) Science 320:807

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