

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Asn21-Pro235, with a C-terminal 6-His tag
Accession # Q8R1R4.1

N-terminal Sequence Analysis Asn21

Structure / Form Noncovalently-linked homodimer

Predicted Molecular Mass 25.4 kDa

SPECIFICATIONS

SDS-PAGE 35-40 kDa, reducing conditions

Activity Measured in a cell proliferation assay using NFS-60 mouse myelogenous leukemia lymphoblast cells.
The ED₅₀ for this effect is typically 10-40 ng/mL.

Endotoxin Level <1.0 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

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.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Interleukin 34 (IL-34; also known as uncharacterized protein C16orf77 homolog) is a 39 kDa, secreted cytokine that belongs to no known cytokine family (1). Mouse IL-34 is synthesized as a 235 amino acid (aa) precursor with a 20 aa signal sequence and a 215 aa mature chain (SwissProt # Q8R1R4). The mature chain contains two potential sites for N-linked glycosylation. There are three isoforms for IL-34. Isoform 1 (Q8R1R4-1) is the recombinant mouse IL-34 described in this insert. Isoform 2 (Q8R1R4-2) has an 85 aa substitution for the final 101 aa's in isoform 1, and isoform 3 (Q8R1R4-3) lacks Q81 in isoform 1. Mouse IL-34 is 71% identical to human IL-34 on the amino acid level. IL-34 is expressed in various tissues, including heart, brain, lung, liver, kidney, spleen, thymus, testes, ovary, small intestine, prostate, and colon, and it 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 viability (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.