

DESCRIPTION

Source *E. coli*-derived human IL-29/IFN-lambda 1 protein
Pro23-Thr200
Accession # Q8IU54.1

N-terminal Sequence Analysis Pro23

Predicted Molecular Mass 20 kDa

SPECIFICATIONS

SDS-PAGE 18-22 kDa, under reducing conditions.

Activity Measured in an anti-viral assay using HepG2 human hepatocellular carcinoma cells infected with encephalomyocarditis (EMC) virus. Sheppard, P. *et al.* (2003) *Nat. Immunol.* 4:63. The ED₅₀ for this effect is 0.500-6.00 ng/mL.

Endotoxin Level <0.10 EU per 1 µg 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 with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

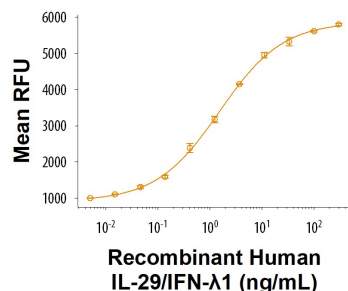
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 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.

DATA

Bioactivity



Recombinant Human IL-29/IFN-lambda 1 Protein Bioactivity. Recombinant Human IL-29/IFN-lambda 1 Protein (Catalog # 11240-IL) demonstrates anti-viral activity in HepG2 human hepatocellular carcinoma cells infected with encephalomyocarditis (EMC) virus. The ED₅₀ for this effect is 0.500-6.00 ng/mL.

BACKGROUND

IL-29, also known as interferon-lambda 1 (IFNλ1), along with IL-28A (IFNλ2), IL-28B (IFNλ3) and IFNλ4, collectively comprise the type III subset of IFNs. IFNλs are class II cytokine receptor ligands distantly related to both members of the IL-10 family and to the type I IFN family (11-19% amino acid (aa) sequence identity). IL-29 is expressed only in humans and shares 67% and 69% aa sequence identity with human IL-28A and IL-28B, respectively. IFNλ signaling was initially thought to be restricted to epithelial cells, but, recently, additional cell types have been shown to also respond. IFNλs have been shown to be induced by a variety of stimuli from influenza A and herpes viruses to lipopolysaccharides and double-stranded RNA. IL-29 signals through a unique receptor complex composed of IFNλR1 (IL-28RA) and the shared IL-10R2 chain, which is also a part of the receptor complexes for IL-10, IL-22, and IL-26. In humans, IL-29 is the most potent IFNλ molecule, the most abundant IFNλ molecule in serum, and the only IFNλ molecule to display N-linked glycosylation. IL-29 is being investigated for its role in immunity, both innate and adaptive, as well as in autoimmune disorders. Additionally, the therapeutic potential of IL-29 in inflammatory diseases and its cancer fighting properties are being actively studied.

References:

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