

Human IL-28A (IFN-lambda 2) (Carrier-Free) Recombinant Protein, eBioscience™

Product Details	
Size	100 µg
Species	Human
Amino acid sequence	Human IL-28A, amino acids Pro27-Val200 (Accession # NP_742150)
Class	Recombinant
Type	Protein
Purity	>80% by SDS-PAGE and RP-HPLC.
Endotoxin concentration	<0.1 ng/µg
Activity	ED50 = 0.3 - 0.5 ng/mL; determined by the activation of STAT phosphorylation in human colon carcinoma cells.
Conjugate	Unconjugated
Form	Lyophilized
Storage conditions	-20°C

Applications	Tested Dilution	Publications
Functional Assay (FN)	Assay-Dependent	-
Control (Ctrl)	Assay-Dependent	-

Product Specific Information

Description: IL-28A belongs to the IFN lambda family, a novel family of cytokines within the IL-10 superfamily. The three members of this family are IL-29 (IFN lambda 1), IL-28A (IFN lambda 2), and IL-28B (IFN lambda 3), and are also known as the type III Interferons.

The IFN lambdas signal through a heterodimeric receptor of which one subunit, IL-10R2, is shared with other members of the superfamily. The second subunit, IFN lambda R1 or IL-28R alpha, is unique to the IFN lambdas. Signaling occurs through the Jak/STAT pathway in a similar manner as the type I IFN (IFN alpha/beta) and activates many of the same genes despite low sequence homology between the cytokines and receptors in the two families. Both IFN families display antiviral activity through the induction of antiviral protein production in target cells and the upregulation of MHC class I expression. These proteins also exhibit antiproliferative and antitumor effects, making them a possible alternative to IFN alpha cancer therapies. Unlike the type I IFN, which are able to stimulate most cells, response to IFN lambda stimulation appears to be limited to dendritic and some tumor cells due to the limited expression of IFN lambda R1. Another notable difference is the ability of the IFN lambda stimulation to drive dendritic cells towards the production of CD4+CD25+FoxP3+ regulatory T cells, suggesting a possible immunoregulatory role

Applications Reported: Recombinant IL-28A (IFN lambda 2) is biologically active and can activate STAT phosphorylation in human colon carcinoma cells in culture.

Applications Tested: The ED50 of this protein, as measured by activation of STAT phosphorylation in human colon carcinoma cells, is 0.3-0.5 ng/mL.

Source: E. coli (amino acids Pro27-Val200; accession # NP_742150).

Bioactivity: The ED50 of this protein, as measured by activation of STAT phosphorylation in human colon carcinoma cells, is 0.3-0.5 ng/mL.

Endotoxin: Less than 0.1 ng/ug cytokine as determined by the LAL assay. Purity: >98% as determined by SDS-PAGE and HPLC.

Molecular Weight: 19.6 kDa.

Storage and handling: For best recovery, quick spin vial prior to opening. Use in sterile environment. Reconstitute in water to a concentration of 0.5-1.0 mg/mL. Do not vortex.Store lyophilized protein at less than or equal to -20°C. Reconstituted protein solution can be stored with carrier protein (e.g., 0.1% BSA) at less than or equal to -20°C.

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