

# 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.

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.