

Epoto Biotech Recombinant Human IL28A/IFN-lambda 2, Tag Free

南京艾璞拓生物科技有限公司

Catalog Number: HF-1028A

General Information

Synonyms	interleukin-28A; IFN-lambda 2; IL28A; IL-28A; interferon, lambda 2
Accession #	Q8IZJ0
Source	Human embryonic kidney cell, HEK293-derived human IL-28A/IFN-lambda 2 protein
	Val26-Val200
Predicted Molecular weight	19.8 kDa

Components and Storage

Formulation	Solution protein. Dissolved in sterile PBS buffer . This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
-------------	--

Storage and Stability	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 °C as supplied.
-----------------------	--

Shipping	Shipping with dry ice.
----------	------------------------

Quality

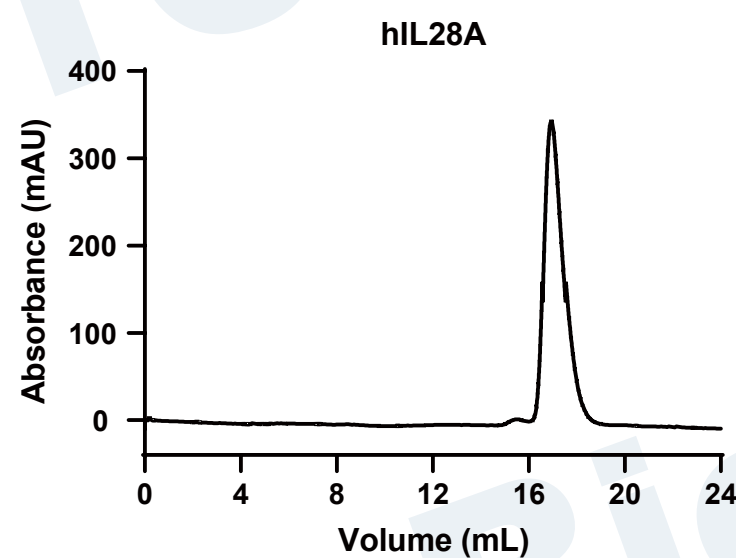
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured in an anti-viral assay using HepG2 human hepatocellular carcinoma cells infected with encephalomyocarditis (EMC) virus. The EC50 for this effect is 5-20 ng/mL.

SDS-PAGE



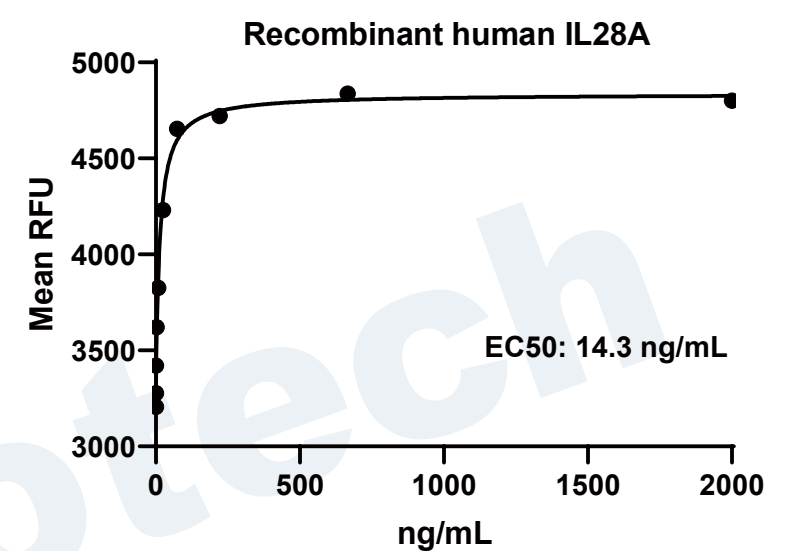
4 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

Gel filtration



Size-exclusion chromatography of recombinant human IL28A protein (280 nm absorbance)

Bioactivity



Recombinant human IL28A (Catalog # HF-1028A) antiviral activity of the HepG2 human hepatocellular carcinoma cells.

Background

Interleukin-28A (IL-28A), IL-28B, and IL-29, also named interferon-lambda 2 (IFN-lambda 2), IFN-lambda 3, and IFN-lambda 1, respectively, are class II cytokine receptor ligands that are distantly related to members of the IL-10 family (11-13% aa sequence identity) and type I IFN family (15-19% aa sequence identity) (1-3). The genes encoding these three cytokines are localized to chromosome 19 and each is composed of multiple exons. The exon organization of these genes is also found in the IL-10 family genes but is distinct from the type I IFNs, which are encoded within a single exon. The expression of IL-28A, B, and IL-29 is induced by virus infection or double-stranded RNA. All three cytokines exert bioactivities that overlap those of type I IFNs, including antiviral activity and up-regulation of MHC class I antigen expression. The three proteins signal through the same heterodimeric receptor complex that is composed of the IL-10 receptor beta (IL-10 R beta) and a novel IL-28 receptor alpha (IL-28 R alpha, also known as IFN-lambda R1). Ligand binding to the receptor complex induces Jak kinase activation and STAT1 and STAT2 tyrosine phosphorylation. The phosphorylated STAT1 and STAT2 complex with IFN-regulatory factor 9 (IRF-9) to form the IFN-stimulated regulatory factor 3 (ISGF-3) transcription factor complex that is translocated to the nucleus. ISGF-3 binds to the IFN-stimulated response element (ISRE) present in the regulatory regions of the target genes. Human IL-28A cDNA encodes a 200 amino acid (aa) residue precursor protein with a putative 25 aa signal peptide. It shares 94% and 67% aa sequence identity with human IL-28B and human IL-29, respectively.

Reference

1. Durbin, R.K. et al. (2013) Immunol. Rev. 255:25.
2. Li, Q. et al. (2013) Front. Biosci. (Landmark Ed.) 18:909.
3. Lopusna, K. et al. (2013) Acta Virol. 57:171.

Contact us



Global www.epotobiotech.com service@epotobiotech.com
China No.10 Xinghuo Road, Pukou District, Nanjing China

TEL:+86 18652072210