IFN-lambda 2/IL-28A Protein, Human (HEK293, His)

Cat. No.:	HY-P72553
Synonyms:	Interferon lambda-2; IFN-lambda-2; IL-28A; IFNL2; IL28A; ZCYTO20
Species:	Human
Source:	HEK293
Accession:	Q8IZJ0 (V26-V200)
Gene ID:	282616
Molecular Weight:	Approximately 20 kDa

PROPERTIES

AA Sequence	V P V A R L H G A L P D A R G C H I A Q F K S L S P Q E L Q A F K R A K D A L E E S L L L K D C R C H S R L F P R T W D L R Q L Q V R E R P M A L E A E L A L T L K V L E A T A D T D P A L V D V L D Q P L H T L H H I L S Q F R A C I Q P Q P T A G P R T R G R L H H W L Y R L Q E A P K K E S P G C L E A S V T F N L F R L L T R D L N C V A S G D L C V
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	IFN-lambda 2 (IL-28A) is a member of the Type-III interferon family. Human IFN-lambda 2 shares 65.1% common aa identity with mouse. IFN-lambda 2 is produced particularly by dendritic cells (DCs), When following viral or bacterial infection[3]. IFN-lambda 2 mediates effects by a heterodimeric receptor complex comprising IFNλ receptor 1 (IFNLR1) and IL-10 receptor subunit-β (IL-10RB). When binding to the receptor complex, Jak1 and Tyk2 will be activated, and leads to subsequent tyrosine phosphorylation of the IFN-λR1 (intracellular domain, Tyr406 and Tyr343, Tyr517), and activation of STAT1 and STAT2. Activated STAT1 and STAT2 together with IRF-9 (p48) form a trimeric transcription factor complex (ISGF3). The formed ISGF3 complexes then translocate to the nucleus and promotes the production of IFN-stimulated genes (ISGs) such

as IRF7, MX1, and OAS1[2].
IFN-lambda 2 has antiviral antitumour and immunomodulatory activities[1]. IFN-lambda 2 has been reported to modulate CD11c+ DC cell function and promote Th1 differentiation, thus suppressing allergic airway diseases[4].

REFERENCES

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[2]. Donnelly RP, et al. Interferon-lambda: a new addition to an old family. J Interferon Cytokine Res. 2010 Aug;30(8):555-64.

[3]. Witte K, et al. IL-28A, IL-28B, and IL-29: promising cytokines with type I interferon-like properties. Cytokine Growth Factor Rev. 2010 Aug;21(4):237-51.

[4]. Yan B, et al. Interleukin-28B dampens airway inflammation through up-regulation of natural killer cell-derived IFN-γ. Sci Rep. 2017 Jun 15;7(1):3556.

[5]. Luo Q, et al. Interleukin 28 is a potential therapeutic target for sepsis. Clin Immunol. 2019 Aug;205:29-34.

[6]. Liangzi Li, et al. Interleukin-28A maintains the intestinal epithelial barrier function through regulation of claudin-1.

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