

Recombinant Human IL-28B/IFN-lambda 3 (His, Flag)

Information

Gene ID	282617
Accession #	AAN28264.1
Alternate Names	interleukin-28B; IFN-lambda 3; IL28B; IL-28B; IL28C; interferon; lambda 3
Source	HEK293
Protein sequence	VPVARLRGALPDARGCHIAQFKSLSPQELQAFKRAKDALEESLLL KDCRCRSRLFPRTWDLRQLQVRERPVALEAELALTLKVLLEATADTDPALGDVLDQPLHTLHHILSQLRAC IQPQPTAGPRTRGRLHHWLHRLQEAPKKESPGCLEASVTFNLFRLLRDLNLCVASGDLCV
Tag	C-His & C-Flag
M.Wt	The protein has a calculated MW of 22.6 KDa.
Appearance	Solution protein
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 36 months from date of receipt, -20 to -70°C as supplied
Concentration	1 mg/mL
Formulation	Supplied as a 0.2 µm filtered solution in PBS, pH7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Fully biologically active as determined by detecting the firefly luciferase activity in HEK293 cells transfected with pISRE_TA_Luc and IL-28 R alpha and IL-10 R beta. The EC50 for this effect is 4-8 ng/mL.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95 % by SDS-PAGE.
Endotoxin	Less than 1.0 EU/µg as determined by LAL method.

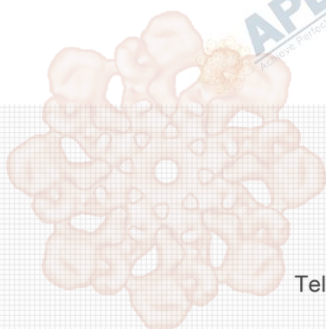
Description

Interleukin-28B (also named interferon-lambda 3, IFN-lambda 3), IL-28A (IFN-lambda 2) and IL-29 (IFN-lambda 1) are type III interferons that are class II cytokine receptor ligands [1-4]. They are distantly related to members of the IL-10 family and type I IFN family [1- 4]. Human IL-28B cDNA encodes a 200 amino acid (aa) protein with a 25 aa signal peptide and a 175 aa mature protein that lacks N-glycosylation sites. Mature human IL-28B shares 64% and 75% aa sequence identity with mouse and canine IL-28B, respectively, and is active across species [5]. Human IL-28B shares 94% and 69% aa identity with human IL -28A and IL-29, respectively [4]. Type III interferons are widely expressed, but are mainly produced by antigen presenting cells in response to viruses and double -stranded RNA that interact with Toll-like receptors or RIG-1 family helicases [2-6]. They signal through a widely expressed receptor that is a heterodimer of the IL-10 receptor beta (IL-10 R beta) and IL-28 receptor alpha (IL-28 R alpha; also called IFN-lambda R1) [2, 3, 7, 9]. Interaction of either type I or type III IFNs with their receptors activates similar pathways, including JAK tyrosine kinase activation, STAT phosphorylation

and formation of the IFN-stimulated regulatory factor 3 (ISGF-3) transcription factor complex [1-3]. Both type I and III IFNs induce anti-viral activity and up-regulate MHC class I antigen expression [2-6]. Cell lines responsive to type III IFNs are also responsive to type I IFNs, but in general, higher concentrations of type III IFNs are needed for similar in vitro responses [8]. In vivo, however, type III IFNs enhance levels of IFN-gamma in serum, suggesting that the robust anti-viral activity of type III IFNs may stem in part from activation of the immune system [5, 7]. Anti-proliferative and antitumor activity in vivo has also been shown for type III IFNs [9-11].

Reference

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