

Recombinant Mouse Interferon-lambda3/Interleukin-28B (Mouse IFN-λ3/IL-28B)

Product Information

Product Name	Cat#	Size
	91214ES08	5 µg
Recombinant Mouse Interferon-lambda3/Interleukin-28B (Mouse IFN-λ3/IL-28B)	91214ES60	100 µg
	91214ES76	500 µg

Product Description

IL-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. They are distantly related to members of the IL-10 family and type I IFN family. 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. Human IL-28B shares 94% and 69% aa identity with human IL-28A and IL-29, respectively. 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. 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). 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. Both type I and III IFNs induce anti-viral activity and up-regulate MHC class I antigen expression. 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. 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. Anti-proliferative and antitumor activity in vivo has also been shown for type III IFNs.

Product Properties

Synonyms	Interleukin 28B; Interferon lambda-3; IFN-lambda-3; Interleukin-28B
Accession	Q8CGK6
GeneID	338374
Source	E.coli-derived mouse Interferon-lambda3/Interleukin-28B protein, Asp20-Val193
Molecular Weight	Approximately 19.6 kDa.
AA Sequence	DPVPRATRLP VEAKDCHIAQ FKSLSPKELQ AFKKAKGAIE KRLLEKDMRC SSSLISRAWD LKQLQVQERP KALQAEVALT LKVWENINDS ALTTILGQPL HTLSHIHSQL QTCTQLQATA EPKPPSRRLS RWLHRLQEAQ SKETPGCLEL SVTSNLFQLL LRDLCVASG DQCV
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 98 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by an anti-viral assay using human HepG2 cells infected with encephalomyocarditis is less than 30 ng/ml, corresponding to a specific activity of > 3.3 × 10 ⁴ IU/mg.
Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.

Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitution	Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!