



Interleukin-28A, mouse recombinant (rIL-28A)

Catalog No: 97650
Lot No: XXXXX
Source: *E. coli*
Synonyms: Interferon lambda-2, IFN-lambda-2, Interleukin-28A, IL-28A, Ifnl2, Il28a, EG330496

Background

IL-28A is distantly related to type I interferons and the IL-10 family. Expression of IL-28A is induced by viral infection which interacts with a heterodimeric class II cytokine receptor that consists of interleukin 10 receptor, beta (IL10RB) and interleukin 28 receptor, alpha. IL-28A exhibits common features with type I IFNs such as antiviral activity, antiproliferative activity and in vivo antitumour activity. IL-28A acts similarly to IFNs, but is less effective generally and has activity in a more limited range of cell lines. IFN-ambda 1, IFN-lambda 2 and IFN-lambda 3 are closely positioned genes on human chromosome 19. IL-28A induces ELR(-) CXC chemokine mRNA in human peripheral blood mononuclear cells, in an IFN-gamma-independent manner. IL-28A is able to generate tolerogenic DCs, an activity that could thwart IFN-beta functions. IL-28A produced in response to viral infection, activates both monocytes and macrophages producing a restricted panel of cytokines and therefore is an important factor in activating innate immune responses at the site of viral infection.

Description

Recombinant Mouse Interleukin-28A produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 174 amino acids and having a total molecular mass of 19.7 kDa. IL-28A is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Mouse IL-28A is lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4 and 5% trehalose.

Solubility

It is recommended to reconstitute the lyophilized IL-28A in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized IFN-Lambda 2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IFN-Lambda 2 Recombinant should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

DPVPRATRLP VEAKDCHIAQ FKSLSPKELQ AFKKAKDAIE KRLLEKDMRC SSHLISRAWD LKQLQVQERP KALQAEVALT
LKVWENMTDS ALATILGQPL HTLSHIHSQL QTCTQLQATA EPKPPSRRLS RWLHRLQEAQ SKETPGCLEL SVTNSLFRLL
TRDLKCVASG DQCV

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Activity

The ED50 as determined by an anti-viral assay using human HepG2 cells infected with encephalomyocarditis(EMC) virus is less than 3 ng/ml, corresponding to a specific activity of $> 3.3 \times 10^5$ IU/mg.

Usage

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