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Certificate of Analysis and Data Sheet

Recombinant Human Interleukin-29 (IL-29) / Interferon-lambda 1 (IFN-lambda 1)

Catalog No.
228-10914

Source:
E. coli

Synonyms

Interleukin-29, IL-29, IFN-Lambda 1, Interferon-Lambda 1, Cytokine ZCYTO21, IL29, IFNL1, ZCYTO21.

Introduction

IL-29 is distantly related to type I interferons and the IL-10 family. Expression of IL-29 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-29 exhibits common features with type I IFNs such as antiviral activity, antiproliferative activity and in vivo antitumour activity.

IL-29 acts similarly to IFNs, but is less effective generally and has activity in a more limited range of cell lines. IFN-lambda 1, IFN-lambda 2 and IFN-lambda3 are closely positioned genes on human chromosome 19.

IL-29 induces ELR(-) CXC chemokine mRNA in human peripheral blood mononuclear cells, in an IFN-gamma-independent manner.

IL-29 is able to generate tolerogenic DCs, an activity that could thwart IFN-beta functions. IL-29 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.

IFN-Lambda 1 antiviral and antiproliferative activity requires Interferon-Lambda 2 receptor tyrosine residues.

Description

IL-29 human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 181 amino acids and having a molecular mass of 20 kDa.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered solution containing no additives.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Solubility

It is recommended to reconstitute the lyophilized IL-29 in sterile 18M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Amino Acid Sequence

GPVPTSKPTTT GKGCHIGRFK SLSPQELASF KKARDALEES LKLKNWSCSS PVFPGNWDLR
LLQVRERPVA LEAELALTLK VLEAAAGPAL EDVLDQPLHT LHHILSQLQA CIQPQPTAGP
RPRGRLHHWL HRLQEAPKKE SAGCLEASVT FNLFRLLTRD LKYVADGNLC LRTSTHPEST.

Stability

Lyophilized IFN-Lambda 1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IFN-Lambda 1 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 90% as determined by

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

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