



Interleukin-29, human recombinant (rHuIL-29)

Catalog No: 08552
Lot No: XXXXX
Source: *E. coli*
Synonyms: Interleukin-29, IL-29, IFN-Lambda 1, Interferon-Lambda 1, Cytokine ZCYTO21, IL29, IFNL1, ZCYTO21

Background

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-ambda 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

Interleukin-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.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-29 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 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.

Amino Acid Sequence

GPVPTSKPTTT GKGCHIGRFK SLSPQELASF KKARDALEES LKLKNWSCSS PVFPGNWDLR LLQVRERPVA LEAELALTLK
VLEAAAGPALE DVLDQPLHTL HHILSQLQAC IQPQPTAGPR PRGRLHHWLH RLQEAPKKES AGCLEASVTF NLFRLLLTRDLK
YVADGNLCLRT STHPEST

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