

Native Human interferon alpha therapeutic protein (Interferon alfa-n3)

Cat. No. Interferon alfa-P029H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Purified, natural human interferon alpha proteins (consists of 3 forms or polymorphisms including 2a, 2b and 2c). 166 residues, some are glycosylated (MW range from 16 kD to 27 kD).

Species

Human

Description

Native Human interferon alpha therapeutic protein upregulates the expression of MHC I proteins, allowing for increased presentation of peptides derived from viral antigens. This enhances the activation of CD8+ T cells that are the precursors for cytotoxic T lymphocytes (CTLs) and makes the macrophage a better target for CTL-mediated killing. Interferon alpha also induce the synthesis of several key antiviral mediators, including 2'-5' oligoadenylate synthetase (2'-5' A synthetase), beta-2 microglobulin, neopterin and protein kinase R. Interferon alpha binds to type I interferon receptors (IFNAR1 and IFNAR2c) which, upon dimerization, activate two Jak (Janus kinase) tyrosine kinases (Jak1 and Tyk2). These transphosphorylate themselves and phosphorylate the receptors. The phosphorylated INFAR receptors then bind to Stat1 and Stat2 (signal transducers and activators of transcription) which dimerize and activate multiple (~100) immunomodulatory and antiviral proteins. Interferon alpha binds less stably to type I interferon receptors than interferon beta.

AA Sequence

(alpha-2A)CDLPQTHSLGSRRTLMLLAQMRKISLFSCLKDRHDFGFPQEEFGNQFQK
AETIPVLHEMI< br="">QQIFNLFSTKDSSAAWDETLLDKFYTELYQQLNLEACVIQG
VGVTTETPLMKEDSILAVRKYFQRITL YLKEKKYSPCAWEVVRAEIMRSFSLSTNLQE

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SLRSKE(alpha-2B)CDLPQTHSLGSRRTLMLLAQ MRRISLFSCCLKDRHDFGFPQEEF
GNQFQKAETIPVLHEMIQQIFNLFSTKDSSAAWDETLLDKFYTELYQQ LNDLEACVIQ
GVGVTTETPLMNEDSILAVRKYFQRITLYLKEKKYSPCAWEVVRAEIMRSFSLSTNLQE
SLR SKE(alpha-2C)CDLPQTHSLGSRRTLMLLAQMRRISLFSCCLKDRRDFGFPQEEF
GNQFQKAETIP VLHEMIQQIFNLFSTKDSSAAWDETLLDKFYTELYQQ LNDLEACVIQ
GVGVTTETPLMNEDSILAVRK YFQRITLYLKEKKYSPCAWEVVRAEIMRSFSLSTNLQ
ESLRSKE

Endotoxin	< 0.1 eu per µg of the
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Purity	>95%
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