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User Manual

Ovine Interferon-tau (IFN-τ) (Ovine)

Cat. No. OPIFP-01012

Description:

IFN-τis a new class of type I IFN that is secreted by the trophoblast and is the signal for maternal recognition of pregnancy in sheep. IFN-τhas potent immunosuppressive and antiviral activities similar to other type I IFN but is less cytotoxic than IFN-α/β. The current investigation concerns the effect of recombinant ovine IFN-tau (IFN-τ) on the modulation of MHC class I and II expression on cloned mouse cerebrovascular endothelial (CVE) cells. IFN-tau induced tyrosine phosphorylation of Stat1 and upregulated the expression of MHC class I on CVE. One proposed action by which type I IFN reduce the relapse rate in MS is via interference with IFN-γ-induced MHC class II expression. IFN-τwas shown to downregulate IFN-γ-induced MHC class II expression on CVE and, hence, may be of potential therapeutic value in downregulating inflammation in the central nervous system (CNS). IFN-τdid not upregulate the expression of MHC class II on CVE. IFN-τalso inhibited the replication of Theiler's virus in CVE.

Source:

Pichia Pastoris

Unit:

10 µg

Reconstitution:

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. 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.

Formulation:

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

Storage:

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

Molecular Weight:

Approximately 19.9 kDa, a single non-glycosylated polypeptide chain containing 172 amino acids.

Endotoxin:

Less than 1 EU/μg of IFN-tau as determined by LAL method.

Usage:

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

Biological Activity:

Fully biologically active when compared to IFN-alpha. The specific activity determined by a viral resistance assay is no less than 1.0×10^7 IU/mg.

Physical Appearance:

Sterile filtered white lyophilized (freeze-dried) powder.

AA Sequence:

CYLSRKLMLD ARENLKLLDR MNRLSPHSCL QDRKDFGLPQ EMVEGDQLQK DQAFPVLYEM LQQSFNLFYT EHSSAAWDTT LLEQLCTGLQ QQLDHLDTCR GQVMGEEDSE LGNMDPIVTV KKYFQGIYDY LQEKGYSDCA WEIVRVEMMR ALTVSTTLQK RLTKMGGDLN SP

Purity:

> 95% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.