

Sheep Interferon tau - Purified

Catalog No.: AR10465PU-S

Quantity: 2 µg

Concentration: 1.0 mg/ml (prior to lyophil.)

Background: IFN-tau is also known as TP-1 (trophoblast protein-1) is 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- tau has potent immunosuppressive and antiviral activities similar to other type I IFN but is less cytotoxic than IFN-alpha and IFN-beta. The current investigation concerns the effect of recombinant ovine IFN- tau (rOIFN- tau) 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 reduces the relapse rate in MS is via interference with IFN-gamma-induced MHC class II expression. IFN-tau was shown to downregulate IFN-gamma-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- tau did not upregulate the expression of MHC class II on CVE. IFN-tau also inhibited the replication of Theiler's virus in CVE.

Uniprot ID: [P56828](#)

NCBI: [NP_001116871.1](#)

GeneID: [100144750](#)

Species: Sheep

Source: E. coli

Format: **State:** Sterile filtered white lyophilized (freeze-dried) powder
Purity: >95.0% as determined by both RP-HPLC and SDS-PAGE analysis.
Purification Method: Proprietary chromatographic techniques.
Buffer System: Lyophilized from (1mg/ml) solution containing PBS, pH 7.4
Reconstitution: Restore in sterile 18MΩ·cm⁻¹ H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Description: Recombinant Ovine Interferon-Tau produced in *E.coli* is a single, non-glycosylated, polypeptide chain containing 172 amino acids.
Protein content: Protein quantitation was carried out by two independent methods:
1. UV spectroscopy at 280 nm using the absorbency value of 1.027 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of IFN-Tau as a Reference Standard.
AA Sequence:
The sequence of the first five N-terminal amino acids was determined and was found to be *Cys-Tyr-Leu-Ser-Arg*.

Biological Activity: The specific activity as determined in a viral resistance assay using bovine kidney MDBK cells was found to be 1×10^7 IU/mg.

Molecular weight: 19914.7 Da

Storage:

Prior to reconstitution store at 2-8°C for one month or desiccated below -18°C.

Following reconstitution store undiluted at 2-8°C for one month

or (in aliquots) at -20°C for longer.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.