



Ovine IFN-tau

Ovine Interferon- τ , recombinant

Synonyms: IFN-tau1, Trophoblast protein 1, TP-1, Trophoblastin, Antiluteolysin, Trophoblast antiluteolytic protein, IFN-tau, IFN tau-1.

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order#	Lot#	Expiry Date
2 μ g	1477.990.002		
10 μ g	1477.990.010		
1 mg	1477.990.199		

Please enquire for bulk quantities and other vial sizes.

Description

Recombinant Ovine Interferon tau is a 19.91 kDa single, non-glycosylated polypeptide chain containing 172 amino acids. It 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- γ -induced MHC class II expression. IFN-tau was 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-tau did not upregulate the expression of MHC class II on CVE. IFN-tau also inhibited the replication of Theilers virus in CVE.

- **Source** *E. coli*
- **Purity** $\geq 95\%$ (SDS-PAGE, RP-HPLC)
- **Endotoxin Level** ≤ 0.1 ng/ μ g (≤ 1 EU/ μ g)
- **Buffer** Lyophilized from (1 mg/ml) solution containing PBS pH -7.4*
- **Physical State** Sterile filtered, lyophilized

Biological Activity

The ED₅₀ as determined in a viral resistance assay using bovine kidney MDBK cells was found to be $\geq 1.0 \times 10^7$ units/mg.

Reconstitution

We recommend a quick spin followed by reconstitution in sterile water of at least 100 μ g/ml. This solution can then be further diluted to other aqueous solutions.

Stability

Lyophilized Recombinant Ovine Interferon-tau although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution the protein 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, order number: 2835.955.xyz or 2835.958.xyz, or BSA, order number: 2835.919.xyz). **Please avoid repeated freeze-thaw cycles.**

Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Cys-Tyr-Leu-Ser-Arg.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.



Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

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