Recombinant Canine Interferon-gamma (rCaIFN-γ)

PrimeGene Technical Data Sheet

Catalog Number:	136-06
Source:	*Escherichia coli.*
Molecular Weight:	Approximately 16.9 kDa, a single non-glycosylated polypeptide chain containing 143 amino acids.
Quantity:	20μg/100μg/1000μg
AA Sequence:	QAMFFKEIEN LKEYFNASNP DVSDGGSLFV DILKKWREES DKTIIQSQIV SFYLKLFDNF KDNQIIQRSM DTIKEDMLGK FLNSSTSKRE DFLKLIQIPV NDLQVQRKAI NELIKVMNDL SPRSNLRKRK RSQNLFRGRR ASK
Purity:	> 97 % by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The ED_{50} as determined by an anti-viral assay using A-72 canine fibroma cells infected with vesicular stomatitis virus (VSV) is less than 2.0 ng/ml, corresponding to a specific activity of > 5.0×10^5 IU/mg.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μm filtered concentrated solution in 25 mM Sodium Succinate, pH 5.0, 60 mM NaCl, with 0.1 % Tween-80.
Endotoxin:	Less than 0.1 EU/μg of rCaIFN-γ as determined by LAL method.
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.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Usage:	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. **NOT FOR HUMAN USE**.

Canine Interferon-gamma

Interferon-gamma (IFN-γ), also known as Type II interferon or immune interferon, is a cytokine produced primarily by T-lymphocytes and natural killer cells. The protein shares no significant homology with IFN-β or the various IFN-α family proteins. Mature IFN-γ exists as noncovalently-linked homodimers. IFN-γ was originally characterized based on its antiviral activities. The protein also exerts antiproliferative, immunoregulatory and proinflammatory activities and is thus important in host defense mechanisms. IFN-γ induces the production of cytokines, upregulates the expression of class I and II MHC antigens, Fc receptor and leukocyte adhesion molecules. It modulates macrophage effector functions, influences isotype switching and potentiates the secretion of immunoglobulins by B cells. Additionally, IFN-γ augments TH1 cell expansion and may be required for TH1 cell differentiation. Canine IFN-γ shares 79 %~88 % amino acid sequence identity with bovine, equine and feline IFN-γ, 62 %~73 % with human, porcine and rhesus macaque IFN-γ, and 40 %~47 % with cotton rat, murine and rat IFN-γ.

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