

ChemWhat Technical Data Sheet (TDS)

Catalog Number:	136-06
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 16.9 kDa, a single non-glycosylated polypeptide chain containing 143 amino acids.
Quantity:	20 μ g/100 μ g/1000 μ g
AA Sequence:	QAMFFKEIEN LKEYFNASNP DVSDGGSLFV DILKKWREES DKTIQSQIV SFYKLKFDNF KDNQIIQRSM DTIKEDMLGK FLNSSTSKRE DFLKLIQIPV NDLQVQRKAI NELIKVMNDL SPRSNLRKRRK 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 \times 10 ⁵ IU/mg.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μ m 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/ μ g 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 \leq -20 $^{\circ}$ 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. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 $^{\circ}$C as supplied.● 1 month, 2 to 8 $^{\circ}$C under sterile conditions after reconstitution.● 3 months, -20 to -70 $^{\circ}$C under sterile conditions after reconstitution.
Usage:	ChemWhat Limited in UK offers this branded product for research, development 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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