

## HumanKine® recombinant human IFN gamma protein



Animal Component-Free

Human cell expressed

Tag-Free

Endotoxin Free

### Product Description

Recombinant Human Interferon gamma (IFN  $\gamma$ ), is a cytokine also known as type II interferon that provides immunity against bacterial, viral and protozoan infections. In its active form, IFN  $\gamma$  occurs as a glycosylated, non-covalently linked homodimer of 17, 21-32 kDa subunits. It is produced by a number of immune cell types such as the natural killer cells, natural killer T cells, and effector lymphocyte T cells following antigenic and inflammatory triggers. Following secretion, the IFN  $\gamma$  dimer binds to its receptor which has two subunits: IFN- $\gamma$ R1 which is the ligand-binding chain ( $\alpha$  chain) and IFN- $\gamma$ R2, the signal-transducing chain ( $\beta$  chain). The activation of the IFN  $\gamma$  receptor leads to activation of the JAK/STAT pathway which in turn activates IFN  $\gamma$  responsive genes. While IFN  $\gamma$  can inhibit viral replication, it also works as an immune-modulator and immune-stimulator by increasing surface expression of class I MHC proteins.

**Alternative Names** IFG, IFI, IFN gamma, IFNG, Immune interferon, Interferon gamma, interferon, gamma

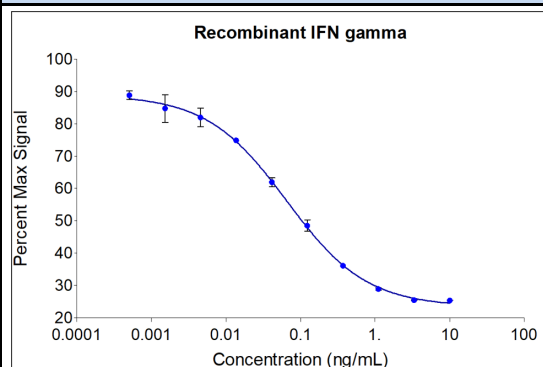
**Source** Human Embryonic Kidney cells (HEK293). HEK293-derived IFN gamma protein

**Species Reactivity** human, mouse

### Specifications

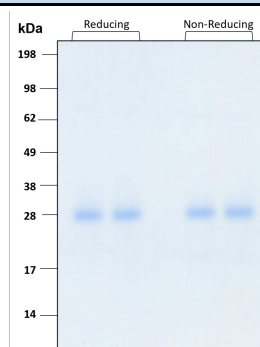
Test	Method	Specification
Activity (EC50)	Dose dependent inhibition of proliferation of HT-29 cells	0.02-0.14 ng/mL
Molecular Mass	SDS-PAGE	17 and 21 to 32 kDa reduced and non-reduced, homodimer, glycosylated
Purity	SDS-PAGE	>95%
Endotoxin	LAL	<1 EU/ $\mu$ g

### Activity Data



Recombinant human IFN gamma (HZ-1301) dose-dependently inhibits proliferation of the HT-29 human colorectal adenocarcinoma cell line. Cell number was quantitatively assessed by PrestoBlue® cell viability reagent. HT-29 cells were treated with increasing concentrations of recombinant IFN gamma for 72 hours. The EC50 was determined using a 4-

### SDS-PAGE



Preparation	
Shipping Temperature	ambient temperature
Formulation	1x PBS, See Certificate of Analysis for details
Reconstitution	Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein to 0.2 mg/mL in sterile 1x PBS pH 7.4 containing 0.1% endotoxin-free recombinant human albumin (HSA). Gently swirl or tap vial to mix.

Stability and Storage	Product Form	Temperature Conditions	Storage Time (From Date of Receipt)
	Lyophilized	-20°C to -80°C	Until Expiry Date
	Lyophilized	Room Temperature	2 weeks
	Reconstituted as per CofA	-20°C to -80°C	6 months
	Reconstituted as per CofA	4°C	1 week
Avoid repeated freeze-thaw cycles.			

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Document #: FR-QA118-101 Rev 0  
Data Sheet Version #: 1

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