

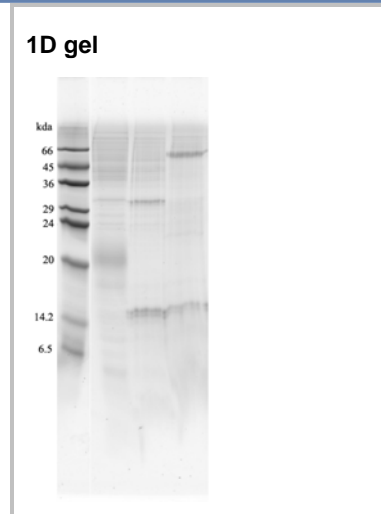
## human cell expressed IFN-gamma<sup>hcx</sup>

<b>Source</b>	A DNA sequence encoding the full-length human IFN-gamma (IFN-g) protein was expressed in modified human 293 cells.
<b>Molecular Mass</b>	Apollo IFN-gamma <sup>hcx</sup> migrates as a band between 20 and 25 kDa in SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified IFN-gamma that has a predicted molecular mass of 17.1 kDa.
<b>pI</b>	Apollo IFN-gamma <sup>hcx</sup> separates into a number of isoforms with a pI between 6 and 10 in 2D PAGE due to post-translational modifications, in particular glycosylation. This compares with the unmodified IFN-gamma that has a predicted pI of 9.5.
<b>% Carbohydrate</b>	Apollo IFN-gamma <sup>hcx</sup> consists of 10-30% carbohydrate by weight.
<b>Glycosylation</b>	Apollo IFN-gamma <sup>hcx</sup> has N-linked and possibly O-linked oligosaccharides.
<b>Purity</b>	>95%, as determined by SDS-PAGE and visualized by silver stain.
<b>Formulation</b>	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
<b>Reconstitution</b>	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
<b>Storage</b>	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.
<b>Activity</b>	The ED <sub>50</sub> of IFN-gamma <sup>hcx</sup> is typically 0.01 - 0.02 ng/ml as measured in a cytotoxicity assay using the HT-29 colorectal adenocarcinoma cell line.
<b>Background Information</b>	<p>Interferon-gamma (IFN-gamma) is a type II interferon and is expressed predominantly by CD8<sup>+</sup> and CD4<sup>+</sup> T cells, and natural killer (NK) cells. IFN-gamma acts as a potent activator of antigen presenting cells as well as inducing expression of IL-12, which in turn promotes a TH1 cell mediated immune response for clearing of viral and microbial infections. IFN-gamma activates non-specific tumoricidal activity in macrophages in addition to enhancing the cytotoxicity of NK cells. IFN-gamma can also directly inhibit proliferation of transformed cells or potentiate the antiviral and anti-tumor effects of the type I interferons.</p> <p>IFN-gamma exists as a non-covalently associated homodimer and functions by binding the IFN-gamma receptor present on T cells, B cells, macrophages, neutrophils and NK cells as well as non-immune somatic cells such as endothelial cells, epithelial cells and fibroblasts.</p> <p>Structurally, IFN-gamma is synthesized as a 166 amino acid precursor glycoprotein with 2 potential N-glycosylation sites with a molecular mass of between 20 and 25 kDa depending on the extent of glycosylation.</p> <p>For a review on IFN-gamma-mediated anti-tumor activity please refer to Tannenbaum CS, Hamilton TA. <i>Semin Cancer Biol.</i> 2000 <b>10</b>(2):113-23.</p>

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## human cell expressed IFN-gamma<sup>hex</sup>



### 1D gel data

Lane 1 – MW markers; Lane 2 – IFN-gamma<sup>hex</sup>; Lane 3 – IFN-gamma<sup>hex</sup> treated with PNGase F to remove potential N-linked glycans; Lane 4 – IFN-gamma<sup>hex</sup> treated with a glycosidase cocktail to remove potential N- and O-linked glycans. 5 µg protein loaded per lane; Deep Purple™ stained.

Drop in MW after treatment with PNGase F indicates presence of N-linked glycans. Faint bands in lane 3 and lane 4 are glycosidase enzymes.

### Theoretical Sequence

CYCQDPYVKEAENLKKYFNAGHSDVADNGTLFLGILKNWKEESDRKIMQSQIVSFYFKL  
FKNFKDDQSIQKSVETIKEDMNVKFFNSNKKKRDDFEKLTNYSVTDLNVQRKAIHELIQV  
MAELSPAAKTGKRKRSQMLFRGRRASQ