

## IFN- $\gamma$ (Interferon gamma)

**Analyte:** Interferon- $\gamma$

**Specimen Type:** For information on this assay, please contact nexelis.

**Biological or Clinical Significance:**

Interferon-gamma, IFN-gamma, also known as immune interferon, is one of a group of functionally related polypeptide hormones that exhibit potent anti-viral activity, both *in vitro* and *in vivo*. In addition to its anti-viral activity, IFN-gamma activates macrophages to kill both tumor cells and intracellular parasites, enhances NK activity and B cell maturation, proliferation and Ig secretion, induces MHC class I and II antigens, and inhibits osteoclast activation. Human IFN-gamma is a 143 amino acid protein with two N-linked glycosylation sites and a molecular weight of 20-25kDa. Production of IFN-gamma is restricted to activated T cells and NK cells. IFN-gamma receptor is comprised of a ligand binding 90kDa-transmembrane glycoprotein, and a less well characterized accessory protein necessary for signal transduction. The receptors are present on virtually all cell types, with the notable exception of erythrocytes, and are abundantly expressed by neural cells. The anti-viral, anti-tumor and anti-parasitic activities displayed by IFN-gamma have suggested that this cytokine may have therapeutic value in a broad spectrum of diseases.

**Principle of Test Method:**

NULL