

# IFNG recombinant protein

CatalogNo: YD3049

## **| Key Features**

Reactivity

Human,

#### Recommended Dilution Ratios

### Storage

**Storage\*** -15°C to -25°C/1 year(Avoid freeze / thaw cycles)

**Formulation** Phosphate-buffered solution

#### **Basic Information**

Source	Mammalian cells
Purification	Mammalian cells
Purity	>90% as determined by SDS-PAGE

# Immunogen Information

**Squence** Amino acid:24-166, with human FC tag.

## | Target Information

Gene name IFNG

**Protein Name** Interferon gamma (IFN-gamma) (Immune interferon)

Organism	Gene ID	UniProt ID
Human	<u>3458;</u>	<u>P01579;</u>

Cellular Localization Secreted.

**Tissue specificity** Released primarily from activated T lymphocytes.

**Function** 

Type II interferon produced by immune cells such as T-cells and NK cells that plays crucial roles in antimicrobial, antiviral, and antitumor responses by activating effector immune cells and enhancing antigen presentation (PubMed:16914093, PubMed:8666937). Primarily signals through the IAK-STAT pathway after interaction with its receptor IFNGR1 to affect gene regulation (PubMed:8349687). Upon IFNG binding, IFNGR1 intracellular domain opens out to allow association of downstream signaling components JAK2, JAK1 and STAT1, leading to STAT1 activation, nuclear translocation and transcription of IFNG-regulated genes. Many of the induced genes are transcription factors such as IRF1 that are able to further drive regulation of a next wave of transcription (PubMed:16914093). Plays a role in class I antigen presentation pathway by inducing a replacement of catalytic proteasome subunits with immunoproteasome subunits (PubMed:8666937). In turn, increases the quantity, quality, and repertoire of peptides for class I MHC loading (PubMed:8163024). Increases the efficiency of peptide generation also by inducing the expression of activator PA28 that associates with the proteasome and alters its proteolytic cleavage preference (PubMed:11112687). Up-regulates as well MHC II complexes on the cell surface by promoting expression of several key molecules such as cathepsins B/CTSB, H/CTSH, and L/CTSL (PubMed:7729559). Participates in the regulation of hematopoietic stem cells during development and under homeostatic conditions by affecting their development, guiescence, and differentiation (By similarity).

#### | Validation Data

#### Contact information

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IFNG recombinant protein

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