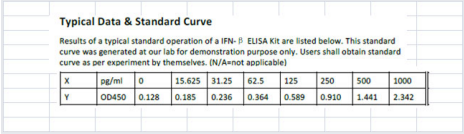
Interferon Beta (IFN-beta) ELISA Kit for Rat

PRODUCT OVERVIEW

Product Name	Interferon Beta (IFN-beta), ELISA Kit
Full Product Name	Rat Interferon Beta ELISA Kit
Product Gene Name	IFN-beta elisa kit
Product Synonym Gene Name	IFN-b
Product Synonym Names	IFN-b/IFNB1/Fibroblast interferon/IFBIFNB/IFF/IFN-beta/interferon beta ; Interferon Beta
Species Reactivity	Rat
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	15.625-1000pg/ml
Sensitivity	9.375pg/ml
Specificity	This assay has high sensitivity and excellent specificity for detection of IFN-beta. No significant cross-reactivity or interference between IFN-beta and analogues was observed.
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Inter-assay Precision	Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level IFN-beta were tested on 3 different plates, 8 replicates in each plate. CV (%) = SD/meanX100. Inter-Assay: CV<10%
Intra-assay Precision	Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level IFN-beta were tested 20 times on one plate, respectively. Intra-Assay: CV<8%
Molecular Weight	22,294 Da
OMIM	147640
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for IFN-beta elisa kit	Principle of the Assay: This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-IFN-beta antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-IFN-beta antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and washed with wash buffer. HRP-Streptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the IFN-beta amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of IFN-beta can be calculated.
Other Notes	Small volumes of IFN-beta elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for IFN-beta purchase	MBS762629 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Interferon Beta (IFN-beta) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing IFN-beta. The ELISA analytical biochemical technique of the MBS762629 kit is based on IFN-beta antibody-IFN-beta antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect IFN-beta antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, IFN-beta. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Data & Standard Curve

Results of a typical standard operation of a IFN- β ELISA Kit are listed below. This standard curve was generated at our lab for demonstration purpose only. Users shall obtain standard curve as per experiment by themselves. (N/A=not applicable)

X	pg/ml	0	15.625	31.25	62.5	125	250	500	1000
Y	OD450	0.128	0.185	0.236	0.364	0.589	0.910	1.441	2.342

Typical Testing Data/Standard Curve (for reference only) of IFN-beta elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IFN-beta. It may not necessarily be applicable to this product.

NCBI GI #	4504603
NCBI GeneID	3456
NCBI Accession #	NP_002167.1
UniProt Secondary Accession #	Q5VWC9
UniProt Related Accession #	P01574
GenBank Nucleotide #	NM_002176.3
NCBI Official Full Name	interferon beta
NCBI Official Synonym Full Names	interferon, beta 1, fibroblast
NCBI Official Symbol	IFNB1
NCBI Official Synonym Symbols	IFB; IFF; IFNB; IFN-beta
UniProt Protein Name	Interferon beta
UniProt Synonym Protein Names	Fibroblast interferon
Protein Family	Interferon
UniProt Gene Name	IFNB1
UniProt Synonym Gene Names	IFB; IFNB; IFN-beta
UniProt Entry Name	IFNB_HUMAN
NCBI Protein Information	interferon beta
NCBI Summary for IFN-beta	This gene encodes a cytokine that belongs to the interferon family of signaling proteins, which are released as part of the innate immune response to pathogens. The protein encoded by this gene belongs to the type I class of interferons, which are important for defense against viral infections. In addition, type I interferons are involved in cell differentiation and anti-tumor defenses. Following secretion in response to a pathogen, type I interferons bind a homologous receptor complex and induce transcription of genes such as those encoding inflammatory cytokines and chemokines. Overactivation of type I interferon secretion is linked to autoimmune diseases. Mice deficient for this gene display several phenotypes including defects in B cell maturation and increased susceptibility to viral infection. [provided by RefSeq, Sep 2015]

UniProt Comments for IFN-beta	IFNB1: Has antiviral, antibacterial and anticancer activities. Belongs to the alpha/beta interferon family. Protein type: Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 9p21 Cellular Component: extracellular region; extracellular space Molecular Function: chloramphenicol O-acetyltransferase activity; cytokine activity; interferon-alpha/beta receptor binding Biological Process: adaptive immune response; B cell activation during immune response; B cell differentiation; B cell proliferation; blood coagulation; cell surface receptor linked signal transduction; cytokine and chemokine mediated signaling pathway; defense response to bacterium; defense response to virus; humoral immune response; innate immune response; natural killer cell activation; natural killer cell activation during immune response; negative regulation of T cell differentiation; negative regulation of viral genome replication; positive regulation of innate immune response; positive regulation of peptidyl-serine phosphorylation of STAT protein; positive regulation of transcription from RNA polymerase II promoter; regulation of MHC class I biosynthetic process; response to exogenous dsRNA; response to virus; T cell activation during immune response
Research Articles on IFN-beta	**1.** Early IFN-beta induction regulated virus replication in glioblastoma cells, whereas delayed IFN-beta induction resulted in efficient virus replication in neuroblastoma cells.
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