

## Rat IFN- $\gamma$ Antibody Pair Set

<b>Catalog No.</b>	E-KAB-0624	<b>Applications</b>	ELISA
<b>Synonyms</b>	IFNG;IFG;IFI;Type II Interferon		

### Kit components & Storage

Title	Specifications	Storage
Rat IFN- $\gamma$ Capture Antibody	1 vial, 100 $\mu$ g	Store at -20°C for one year. Avoid freeze/thaw cycles.
Rat IFN- $\gamma$ Detection Antibody (Biotin)	1 vial, 50 $\mu$ L	Store at -20°C for one year. Avoid freeze/thaw cycles.

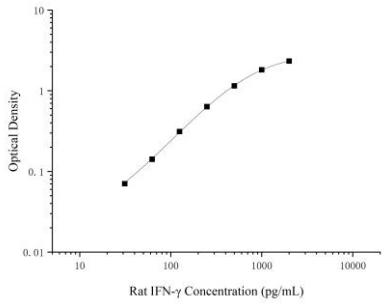
**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

### Product Information

Items		Characteristic (E-KAB-0624)	
		Rat IFN- $\gamma$ Capture Antibody	Rat IFN- $\gamma$ Detection Antibody (Biotin)
Immunogen Information	Immunogen	Recombinant Rat IFN- $\gamma$ protien	Recombinant Rat IFN- $\gamma$ protien
	Swissprot	P01581	
Product details	Reactivity	Rat	Rat
	Host	Mouse	Goat
	Conjugation	Unconjugated	Biotin
	Concentration	0.5 mg/mL	/
	Buffer	PBS with 0.04% Proclin 300; 50% glycerol; pH 7.5	PBS with 0.04% Proclin 300; 1% protective protein; 50% glycerol; pH 7.5
	Purify	Protein A or G	Antigen Affinity
	Specificity	Detects Rat IFN- $\gamma$ in ELISAs.	

## Applications

### Rat IFN- $\gamma$ Sandwich ELISA Assay:

	Recommended Concentration/Dilution	Reagent	Images
ELISA Capture	0.5-4 $\mu\text{g/mL}$	Rat IFN- $\gamma$ Capture Antibody	
ELISA Detection	1:1000-1:10000	Rat IFN- $\gamma$ Detection Antibody (Biotin)	

**Note:** This standard curve is only for demonstration purposes. A standard curve should be generated for each assay!

## Background

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. Primarily signals through the JAK-STAT pathway after interaction with its receptor IFNGR1 to affect gene regulation. 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. Plays a role in class I antigen presentation pathway by inducing a replacement of catalytic proteasome subunits with immunoproteasome subunits. In turn, increases the quantity, quality, and repertoire of peptides for class I MHC loading. 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. 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. Participates in the regulation of hematopoietic stem cells during development and under homeostatic conditions by affecting their development, quiescence, and differentiation.