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Datasheet for 201-401-C41S

Interferon Gamma Antibody

Overview

Description:	Anti-Bovine Interferon gamma (RABBIT) Antibody - 201-401-C41S
Item No.:	201-401-C41S
Size:	25 µL
Applications:	ELISA, WB, Other
Reactivity:	Bovine
Host Species:	Rabbit

Product Details

Background:	Interferon-gamma (IFN-gamma) is a dimerized soluble cytokine that is the only member of the type II class interferon. This interferon was originally called macrophage-activating factor, a term now used to describe a larger family of proteins to which IFN-gamma belongs. IFN-gamma, or type II interferon, is a cytokine that is critical for innate and adaptive immunity against viral and intracellular bacterial infections and for tumor control. Aberrant IFN-gamma expression is associated with a number of autoinflammatory and autoimmune diseases. The importance of IFN-gamma in the immune system stems in part from its ability to inhibit viral replication directly, but, most important, derives from its immunostimulatory and immunomodulatory effects. IFN-gamma is produced predominantly by natural killer (NK) and natural killer T (NKT) cells as part of the innate immune response, and by CD4 and CD8 cytotoxic T lymphocyte (CTL) effector T cells once antigen-specific immunity develops.
Synonyms:	rabbit anti-IFN gamma, rabbit anti-Interferon gamma, IFNG, BoIFNG
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	IFN gamma
Reactivity:	Bovine
Immunogen Type:	Recombinant Protein

Immunogen:	This protein A purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a recombinant protein raised in yeast corresponding to the 143 amino acids of the mature Bovine IFN Gamma protein.
Purity/Specificity:	This product was protein A purified from monospecific antiserum by chromatography. This antibody is specific for bovine IFN gamma protein. A BLAST analysis was used to suggest cross-reactivity with IFN gamma from bovine based on 100% homology; cross-reactivity to yak, bison, zebu, buffalo, goat, sheep, nilgai, giraffe, Chinese forest musk deer, sika deer, red deer, Arabian camel, and Bactrian camel based on 91-99% homology with the immunizing sequence. Cross-reactivity with IFN gamma from other sources has not been determined.
Relevant Links:	• UniProtKB - A9QXB7 • NCBI - NP_776511.1 • GeneID - 281237

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	Other (Based on references)
Application Note:	This protein A purified IFN-gamma antibody has been tested by ELISA and Western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 16.9 kDa in size corresponding to bovine IFN gamma by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:20,000
WB:	1:500-1:2,000

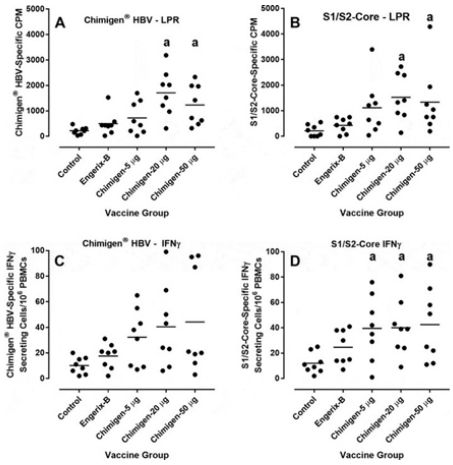
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.59 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

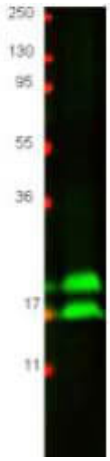
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is three (3) months from date of receipt.

Images



ELISA
Chimigen® HBV and S1/S2-Core-specific LPR and IFN-γ secretion of sheep PBMC following the third C-HBV injection. Lambs (n = 8/group) were injected subcutaneously with one of following formulations: Naïve Control (PBS); ENGERIX-B (20 µg/dose); Chimigen® HBV (5 µg/dose, 20 µg/dose, and 50 µg/dose). LPR were determined by [3H]-thymidine incorporation (CPM) at 72 h following stimulation of PBMC with either 5 µg/mL Chimigen® HBV (Panel A) or 3.3 µg/mL S1/S2-Core protein (Panel B). Data presented are mean values of triplicate assays and this value is presented for each animal within a group. An IFN-γ capture ELISPOT assay was used to enumerate the frequency of IFN-γ secreting cell at 24 h following stimulation of PBMCs with either 5 µg/mL Chimigen® HBV (Panel C) or 3.3 µg/mL S1/S2-Core protein (Panel D). Data presented are the mean value of triplicate assays and this value is presented for each animal within a group. The number of antigen-specific IFN-γ secreting cells was calculated by subtracting the number of IFN-γ spots in the absence of antigen from the number of IFN-γ spots in the presence of antigen. Significant increases in either CPM or IFN-γ secreting cells relative to the Naïve Control group are indicated (a = $p < .05$). There were no significant differences among the three Chimigen® HBV vaccine groups. Fig 7. PMID: 31687875



Western Blot
Western blot using Rockland's protein-A purified anti-bovine IFN gamma antibody shows detection of recombinant bovine IFN gamma at 16.9 kDa, raised in yeast. Primary antibody was diluted to 1µg/mL. 3% BSA from Rockland's BSA-30 (Bovine Serum Albumin Solution) was used for blocking. Secondary antibody 611-131-122 (Goat anti-Rabbit IgG IRDye 800) was used at 1:20,000.

References

- George R. et al. A dendritic cell-targeted chimeric hepatitis B virus immunotherapeutic vaccine induces both cellular and humoral immune responses in vivo. *Human Vaccines & Immunotherapeutics* (2020)

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