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Datasheet for 201-401-C41

Interferon Gamma Antibody

Overview

Description:	Anti-Bovine Interferon gamma (RABBIT) Antibody - 201-401-C41
Item No.:	201-401-C41
Size:	100 µg
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:	• NCBI - NP_776511.1 • UniProtKB - A9QXB7 • 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

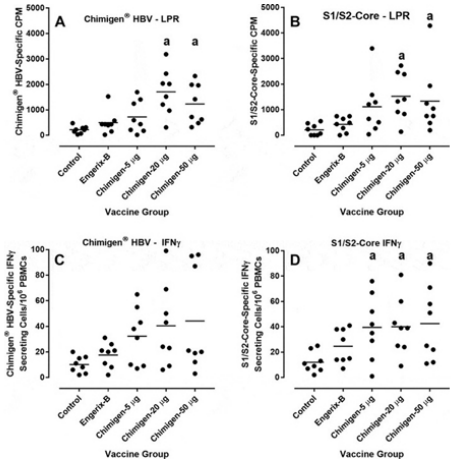
Formulation

Physical State:	Lyophilized
Concentration:	1.0 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
Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

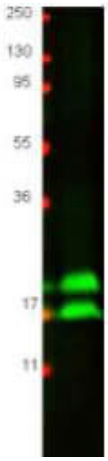
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year 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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