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www.rockland.com
tech@rockland.com
+1 484.791.3823

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

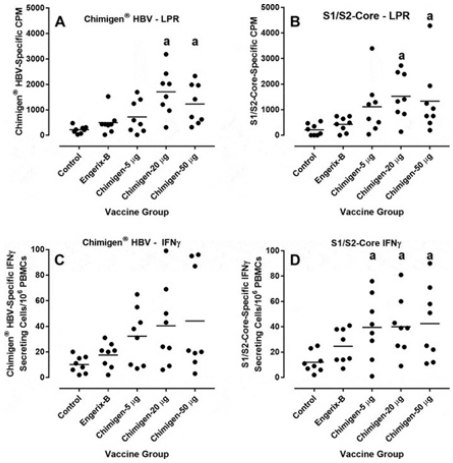
Formulation

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)

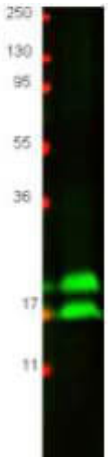
Shipping & Handling

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)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.