bioNova científica, s.l.

Veterinary Research

Antibodies and Kits

BIO-RAD

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Veterinary Immunology Range

Bio-Rad is the trusted veterinary antibody producer and the supplier of choice to healthcare, commercial, academic and government organizations at the cutting-edge of breakthrough science. Bio-Rad is globally recognized as being at the forefront of veterinary antibody manufacturing, with a reputation for product excellence and unrivalled customer support built up over 30 years.

Bovine

Achieving the eradication of bovine tuberculosis is one of the key objectives of bovine research and also a main focus of many government veterinary health programs. While conventional herd management techniques play a key role, basic and applied research in bovine adaptive and innate immunology is crucial for the development of vaccine and measuring correlates of protection for bovine tuberculosis and other infectious diseases.

To conduct research in this area, Bio-Rad supplies antibodies to investigate adaptive and innate immune cells and key cytokines.

Canine

The diagnosis of lymphoid leukemia and lymphomas in dogs is aided by flow cytometry analysis.

Our multicolor flow panels support experiments to assay canine T cells and are complemented by a comprehensive range of conjugated antibodies for staining T and B cells and cells of the innate immune compartment.

Porcine

Pigs have played a major role in translational research for many years, mainly in the areas of medical device development, therapeutics and xenotransplantation. The completion of the pig genome has led to development of genetically modified pigs to study cystic fibrosis.

Antibodies specific for markers of T, B and dendritic cells, and monocytes and macrophages are available to profile pig immune cell populations. Immune response studies are supported by anti-cytokine antibodies validated for ELISA.

Avian

While birds and mammals both have innate and adaptive components to their immune systems, with cell mediated and humoral responses, there are differences in the organs, cells, and effector molecules responsible for immune defense. As well as being a scientifically interesting model organism with a less complex immune system than mammals, avian health and wellbeing is very important to the security of food production and public health.

Bio-Rad supplies antibodies to stain adaptive and innate immune cells and measure key cytokines in chicken and other avian species.

New Application Resources

No Experiment is Complete Without All the Pieces

Complete yours at www.bionova.es

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Bio-Rad Veterinary Immunology Range: Trusted By Researchers

Bovine Dendritic Cell Growth Kits

- Guaranteed to generate dendritic cells from PBMC
- Save time with premixed, ready-to-use active cytokines
- Phenotype with a panel of species-specific antibodies
- Available in 2 pack sizes: 1 ml and 5 ml

Does your research require dendritic cells? The bovine dendritic cell growth kits can save you the time and effort of developing your own method and optimizing the individual reagents. The kit uses biologically active recombinant Interleukin-4 (IL-4) and Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF), supplied as a premixed liquid at optimal concentrations to induce dendritic cell development from PBMC after isolation with CD14.

Dendritic cells can be identified using cell surface phenotyping by demonstrating a high level of MHC Class II or co-stimulatory molecules such as CD80 or CD86, and the absence of lineage markers, such as CD3 (T cell), CD14 (monocyte), CD19 (B cell), CD56 (Natural Killer cell) and CD66b (granulocyte).

Specificity	Clone	Catalog Number
CD11b	CC126	MCA1425
CD14	CC-G33	MCA2678
	TÜK4	MCA1568*
CD28	CC220	MCA5778
	CC219	MCA5779
CD40	IL-A156	MCA2431
CD80	IL-A159	MCA2436
CD86	IL-A190	MCA2437
CD172a	CC149	MCA2041
CD205	CC98	MCA1651
	IL-A114	MCA2450
MHC class II DQ and DR	DQ-CC158	MCA5655
	DR-CC108	MCA5656

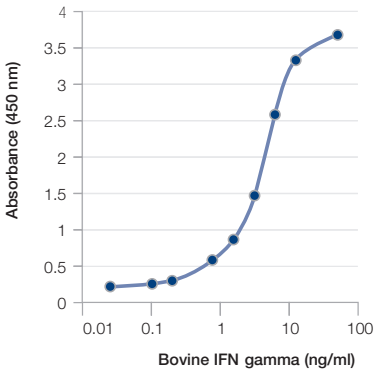
* Human antibody known to cross-react with bovine and ovine samples

Bovine Interferon gamma ELISA Kit

- Wide detection range covers physiological levels, disease states and *in vitro* stimulated cells
- Validated for serum, plasma and culture supernatant
- Quantitative results in one day
- Includes ELISA plates and reagents for 480 tests (5x 96 wells)

Measurement of IFN gamma is a key readout of the bovine immune response. IFN gamma is a secreted, pro-inflammatory cytokine, produced by lymphocytes in response to activation by specific antigens or mitogens. It plays a critical part in immune and inflammatory responses, and has been identified as a potential therapeutic agent and marker for autoimmune and infectious diseases. Its measurement in cattle is particularly significant in relation to testing for bovine tuberculosis. ELISA validated antibody pairs for IL-4, IL-10 and TNF alpha are available to complement the IFN gamma kit.

Description	Catalog Number
Bovine IFN gamma Kit	MCA5638KZZ

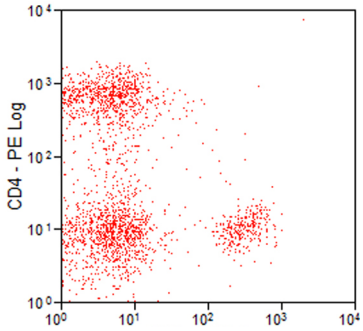


Typical calibration curve for Bio-Rad Bovine IFN gamma Kit; detection range 0.025 - 50 ng/ml.

Canine Flow Cytometry Panel Kits

- Canine dual and triple specificity antibody kits allow rapid profiling of canine T lymphocytes
- The antibody cocktails are supplied pre-mixed in optimized ratios for added convenience

Clone CA17.2A12 recognizes canine CD3, which is a pan T lymphocyte marker. Clone YKIX302.9 recognizes canine CD4, which is expressed by T helper cell subset. Clone YCATE55.9 recognizes CD8 alpha, which is expressed by cytotoxic T cells.



Canine CD3 positive cells from peripheral blood analyzed for CD4 and CD8 staining using anti-dog CD3:FITC/CD4:PE/CD8:Alexa Fluor®647 (TC014)

Specificity	Catalog Number
CD3:FITC/CD4:RPE/ CD8:AlexaFluor® 647	TC014
CD3:FITC/CD4:RPE	DC046
CD3:FITC/CD8:RPE	DC047
CD4:FITC/CD8:RPE	DC048

Canine Multi Color Flow Cytometry

Staining with combinations of antibodies, it is possible to identify lymphocytes, monocytes, granulocytes, T cells, T cell subsets, and B cells in dogs.

This analysis employs the anti-canine CD3 FITC (MCA1774F), CD21 PE (MCA1781PE), CD4 PECy7 (MCA1038PECY7), CD8 AF647 (MCA1039A647) antibodies and the human cross-reactive antibodies HLADR PECy5 (MCA2812C) and CD14 AF647 (MCA1568A647).

Chicken Leukocytes

Chickens have unique aspects to their immune system and differ from other model organisms such as rodents.

To further research in the avian immune system, Bio-Rad supplies antibodies to study the key chicken immune cell populations.

T cells: CD3, CD4, CD8a, CD25, and CD28
B cells: BU-1a and CD79

Macrophage and dendritic cell research: CD14, CD86, MHC Class II

Porcine Leukocytes

Porcine immune cells can be analyzed with antibodies available from Bio-Rad.

The key T cell populations can be stained with antibodies to porcine CD3, CD4a, and CD8a. B cells can be revealed using the anti-CD5 and CD79 antibodies.

Dendritic cells can be assayed with antibodies specific for CD163 and CD172a (SIRP-alpha); monocytes and macrophages can be stained for using anti-CD11R3, -CD14, and -CD16.

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