

Product Information

Anti-Bovine IgG-Peroxidase antibody

Mouse monoclonal, Clone BG-18,
purified from hybridoma cell culture

Product Number **SAB4200796**

Product Description

Monoclonal Anti-Bovine IgG (mouse IgG1 isotype) is derived from the BG-18 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with the purified bovine IgG. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Product number ISO2). The antibody is purified from culture supernatant of hybridoma cells and is conjugated to horseradish peroxidase.

Monoclonal Anti-Bovine IgG specifically recognizes an epitope on the heavy chain of both bovine IgG1 and IgG2. The antibody does not react with SDS-denatured and reduced bovine IgG. The antibody shows no cross-reactivity with bovine IgM or IgG from the following species: human, goat, sheep, rabbit, pig, dog, chicken, cat, guinea pig, or horse. The antibody is recommended to use in various immunological techniques, including ELISA,¹ immunohistochemistry,² and immunoblotting.³

The bovine immunoglobulin system closely resembles that of other mammalian species with respect to the physicochemical properties and nomenclature. The main bovine IgG class antibodies are IgG1 and IgG2, which have antigenic differences in the Fc region of the heavy chains.⁴ Different immunoglobulin classes and subclasses (isotypes) perform distinctive effector functions. Therefore, the ability to characterize antibody isotype is fundamental to the analysis of the immune response. The diversity of immunoglobulin isotypes associated with the immunity pattern serves as an indicator indistinguishing the phase of infection with various agents. Conventional antibodies to bovine immunoglobulins may suffer from the lack of species specificity thus recognizing the immunoglobulins of other species that appear in assay procedures. This is often observed when the preparation being tested is of human origin, resulting in the need for extensive adsorption to remove this cross-reactivity. Monoclonal Anti-Bovine IgG antibody can be a useful tool for detection and quantification of bovine immunoglobulin in bovine plasma samples.

Reagent

Supplied as a lyophilized powder.

Preparation Instructions

Reconstitute the contents of the vial with 0.25 mL of distilled water to a final antibody concentration of 2 mg/mL. After reconstitution, the solution contains 1% BSA, 2.5% trehalose, and 0.05% MIT in 0.01 M sodium phosphate buffered saline.

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the lyophilized product at 2–8 °C. For extended storage after reconstitution, keep at –20 °C in working aliquots. Avoid repeated freeze-thaw cycles. For continuous use after reconstitution, keep at 2–8 °C for up to 1 month. Solutions at working dilution should be discarded if not used within 12 hours.

Product Profile

Direct ELISA: a working dilution of 1:20,000-1:40,000 is recommended using 1 µg/mL bovine IgG for coating.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration.

References

1. Rodrigues da Silva, A.C. et al., *Rev. Inst. Med. Trop. Sao Paulo*, **42**, 95-8 (2000).
2. Asti, R.N. et al., *Kafkas Universitesi Veteriner Fakultesi Dergisi*, **17**, 223-8 (2011).
3. Jenkins, C., and Bogema, D.R., *Parasit. Vectors.*, **9**, 106 (2016).
4. Saini, S.S. et al., *Scand. J. Immunol.*, **65**, 32-8 (2007).

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