

Product Information

Monoclonal Anti-Bovine IgM, clone BM-23

produced in mouse, ascites fluid

Catalog Number **I6137**

Product Description

Monoclonal Anti-Bovine IgM (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified bovine IgM was used as the immunogen. The isotype is determined by a double diffusion assay using immunoglobulin and subclass specific antisera.

Monoclonal Anti-Bovine IgM is specific for an epitope located on the heavy chain of bovine IgM as demonstrated by indirect ELISA, dot blot or other immunoblotting procedures. The product does not react with bovine light chains, either in their native or reduced form. In an ELISA, the antibody does not cross react with bovine, goat or sheep IgG, or with human IgG and IgM. A dot blot assay shows reaction only with bovine serum, no cross reaction was observed with sera from the following: human, baboon, marmoset, gibbon, rhesus, hamster, rabbit, goat, pig, dog, rat, turkey, chicken, or catfish.

The bovine immunoglobulin system closely resembles that of other mammalian species with respect to the physiochemical properties and nomenclature. The IgG class antibodies (IgG1 and IgG2) have antigenic differences in the Fc regions of their heavy chains. Different immunoglobulin classes and subclasses (isotypes) perform distinctive effector functions, therefore the ability to characterize antibody isotype is fundamental to the analysis of humoral immune responses.

The diversity of immunoglobulin isotypes associated with the immunity pattern serves as an indicator to distinguish the phase of infection with various agents.

A strong response may indicate an early stage of disease. Methods commonly in use for detection of

bovine antibodies to infectious agents may miss a weak IgM response. The rapid determination and titration of antibodies to these agents in a large number of samples can be facilitated by the use of an appropriate monoclonal antibody. Conventional antibodies to bovine immunoglobulins, may suffer from a lack of species specificity thus recognizing the immunoglobulins of other species that appear in assay procedures. This is often observed with test material of human origin, resulting in the need for extensive adsorption to remove cross reactivity.

Reagents

Supplied as ascites fluid with 15 mM sodium azide as a preservative.

Precautions

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage

For continuous use, store at 2-8 °C for up to one month. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

Indirect ELISA: a minimum working dilution of 1:4,000 was determined using purified bovine IgM (10 µg/ml) as coat.

Note: In order to obtain best results, in different procedures or techniques, it is recommended that each individual user determine their optimum working dilution by titration assay.

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