

Product No. I 6137
Lot 057H4849

Monoclonal Anti-Bovine IgM
Mouse Ascites Fluid
Clone BM-23

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. The product is provided as ascites fluid with 0.1% sodium azide (see MSDS)* as a preservative.

Specificity

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.

Description

The bovine immunoglobulin system closely resembles that of other mammalian species with respect to the physicochemical 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.

Uses

Monoclonal Anti-Bovine IgM may be used for the detection and localization of bovine IgM when applied in systems such as ELISA, dot blot, immunoblot and Ouchterlony double diffusion (ODD).

Working Dilution

A working dilution of 1:1000 was determined by indirect ELISA using purified bovine IgM (10 µg/ml) as coat.

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.

Storage

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

*Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.