Monoclonal Anti-Bovine IgG
Clone BG-18
Mouse Ascites Fluid

Product No. B6901

**Product Description**
Monoclonal Anti-Bovine IgG (mouse IgG1 isotype) is derived from the hybridoma produced the fusion of mouse myeloma cells and splenocytes of an immunized mouse. Purified bovine IgG was used as the immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-Bovine IgG is specific for an epitope on the heavy chain of both bovine IgG1 and IgG2 as demonstrated by ELISA or dot blot procedures. The product does not react with SDS-denatured and reduced bovine IgG. In an ELISA procedure the antibody does not cross react with bovine IgM or IgG from the following species: human, goat, sheep, rabbit, pig, dog, chicken, cat, guinea pig or horse.

Monoclonal Anti-Bovine IgG may be used for the detection and localization of bovine IgG when applied in such systems as an ELISA or a dot blot.

The bovine immunoglobulin system closely resembles that of other mammalian species with respect to the physiochemical properties and nomenclature. The IgG class antibodies contains two subclasses, IgG1 and IgG2, which have antigenic differences in the Fc portion of the 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 response.

The diversity of immunoglobulin isotypes associated with the immunity pattern serves an an indicator in distinguishing the phase of infection with various agents. A strong response may indicate an early stage in the disease state. 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 appropriate monoclonal antibodies.

Conventional antibodies to bovine immunoglobulins suffer from the lack of species specificity thus recognizing the immunoglobulins of other species that appear in assay procedures. This is often observed when preparation being tested is of human origin, resulting in the need for extensive adsorption to remove this cross-reactivity.

**Reagents**
The product is provided as ascites fluid containing 0.1% sodium azide as a preservative.

**Precautions**
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.

**Product Profile**
A working dilution of 1:1,000 was determined by an ELISA using purified bovine IgG at 10 μg/ml as a coat. In order to obtain best results it is recommended that each individual user determine working dilution by titration assay.

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