

ProductInformation

MONOCLONAL ANTI- β -GALACTOSIDASE

CLONE GAL-13

Mouse Ascites Fluid

Product No. **G 8021**

Product Description

Monoclonal Anti- β -Galactosidase (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. β -D-Galactosidase purified from *E. coli* 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- β -Galactosidase reacts with soluble β -d-galactosidase and retains the enzymatic activity. The antibody reacts with against the native enzyme when coated on solid phase in ELISA or an immunodot blot. The antibody does not recognize denatured or reduced β -galactosidase.

Monoclonal Anti- β -Galactosidase may be used for the amplification of the signal obtained with primary mouse monoclonal antibodies used in various immunochemical techniques such as ELISA, immunohistochemistry and immunoblotting, both by stepwise procedure or the preparation of an BGABG complex. The BGABG complex may also be used together with other enzymelabeled antibodies such as peroxidase or peroxidase-anti-peroxidase (PAP) or alkaline phosphatase anti-alkaline phosphatase (APAAP) for double labeling and easy evaluation due to high color contrast.

This antibody maybe useful for immunoenzymatic staining of blood and bone marrow smears or tissue sections. In addition, this product may be used as a primary antibody for the detection and purification of recombinant fusion proteins, which contain β -galactosidase in the cloning vector.

Mouse monoclonal antibodies are of increasing importance for the immunochemical detection of antigens in histological and cytological preparations and for the detection and quantitation of solid-phase antigens in techniques such as ELISA and immunoblotting. The specificity and the absence of background staining of monoclonal antibodies are only fully exploited if optimal methods are used to detect their binding. The binding of monoclonal antibodies is usually monitored by a second antibody directed to the mouse immunoglobulin or by the conjugation of the antibody to a label such as an enzyme or fluorochrome. An alternative to the preparation of covalent antibody/enzyme conjugates is to use an antibody bridge between a specific antibody and an anti-enzyme antibody, the latter acting as an acceptor of the subsequently added enzyme. This method using β -galactosidase as the marker has been further simplified by previously preparing a β -galactosidase anti- β -galactosidase (BGABG) soluble complex. The use of monoclonal BGABG complexes in the unlabeled antibody-enzyme method results in an intense signal with a very low background, while the problems inherent to the conjugation of antibodies are avoided. The interference by endogenous enzyme activity in mammalian antigen preparations on one had and the toxic substrate used when other enzyme-labels are applied, are avoided by the choice of β -galactosidase as the labeling enzyme.

Reagents

The product is provided as ascites fluid with 15 mM 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 hazardous and safe handling practices.

Product Profile

A minimum working dilution of 1:2,000 was determined by indirect ELISA using a mouse monoclonal primary antibody, bridging antibody and β -d-galactosidase from *E. coli*.

In order to obtain optimum results, it is recommended that each individual user determine their optimum working dilutions by titration assay.

Storage

For continuous use, store at 2-8 °C for up to one month. 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.

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