Product No. B-2531
Lot 074H4814

Monoclonal Anti-BrdU (Immunohistology Grade)
Mouse Ascites Fluid
Clone BU-33

Monoclonal Anti-BrdU (Immunohistology Grade) (mouse IgG1 isotype) is derived from the BU-33 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with BromodeoxyUridine conjugated to KLH. The isotype is determined using Sigma ImmunoType™ Kit (Sigma Stock No. ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma Stock No. ISO-2). The product is provided as ascites fluid with 0.1% sodium azide (see MSDS)* as preservative.

Specificity

Monoclonal Anti-BrdU (Immunohistology Grade) reacts specifically with BrdU (BromodeoxyUridine) incorporated into DNA, or coupled to a protein carrier. It recognizes BrdU in the nuclei of formalin-fixed, paraffin-embedded tissue sections of animals treated with an *in vivo* administration of BrdU.

Description

A broad range of biological and biomedical investigations depend on the ability to distinguish DNA synthesizing cells. Until recently, these studies were often limited by the traditional measurement techniques that are based on the determination of incorporated radioactive DNA precursors such as tritiated thymidine. BromodeoxyUridine (5-Bromo-2-DeoxyUridine, BrdU) is a pyrimidine analogue of thymidine, selectively incorporated into cell DNA at the S phase of the cell cycle. The use of BrdU as a thymidine analogue has made the identification of DNA synthesis in suspensions of cells, cell smears and tissue sections possible. The application of monoclonal antibodies which react specifically with BrdU[1,2] for detection of DNA replication in lymphoid cells[3] and other normal or pathological preparations,[4] following *in vivo* or *in vitro* BrdU labeling, is extensively documented in the biomedical literature. Monoclonal antibodies against BrdU have also proven valuable for studies on cell cycle kinetics, repair synthesis of DNA, demonstration of sister chromatid exchange and assessment of cell proliferation in the presence of growth factors or cytotoxic drugs.

Uses

Monoclonal Anti-BrdU (Immunohistology Grade) may be used for the detection of BrdU labeled preparations using various immunocytochemical and immunohistochemical assays.

Titer 1:1,000

The antibody titer was determined by immunoperoxidase labeling of formalin-fixed, paraffin-embedded sections of intestine from mouse or rat, treated *in vivo* with BrdU.

In order to obtain best results in different techniques and preparations, we recommend to determine optimal working dilutions by titration test.

Storage

For continuous use, store at 0-5°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.

References

1. Gratzner, H., Science, **218**, 474-475 (1982).
2. Gray, J., (Editor), Special Issue: Monoclonal Antibodies Against Bromodeoxyuridine, Cytometry, Vol. 6 (6) (1985).
3. Nakamura, S., et al., Oncology, **48**, 285-289 (1991).
4. Meyer, J., et al., J. Histochem. Cytochem., **37**, 1449-1454 (1989).