

Amersham Monoclonal anti-Bromo-deoxyuridine (clone BU-1)

Product Specification Sheet

Code: RPN202

Warning

For research use only.

Not recommended or intended for diagnosis of disease in humans or animals.

Do not use internally or externally in humans or animals.

Storage

Store refrigerated at 2–8°C. Under these conditions the product is stable for at least 3 months.

Expiry

See outer packaging.

Safety warnings and precautions

All chemicals should be considered as potentially hazardous. We therefore recommend that this product is handled only by those persons who have been trained in laboratory techniques and that it is used in accordance with the principles of good laboratory practice. Wear suitable protective clothing such as laboratory overalls, safety glasses and gloves. Care should be taken to avoid contact with skin or eyes. In the case of contact with skin or eyes wash immediately with water. See material safety data sheet(s) and/or safety statement(s) for specific advice.

Components

Anti-5-2'-deoxyuridine monoclonal antibody:

The monoclonal antibody is supplied in a concentrated form in Tris Buffered Saline containing 0.8% Bovine Serum Albumin, Magnesium Chloride and a preservative. The monoclonal antibody is of murine origin, subclass IgG2a.

Nuclease:

The nuclease for denaturation is supplied in freeze-dried Tris Buffered Saline containing 1% Bovine Serum Albumin, Magnesium Chloride and a stabilizer.

Antibody class

IgG2a antibody produced by fusion between P3/NS1/1-Ag4-1 myeloma cells and Balb/c spleen cells.

Immunogen

5-Iodo-uridine/ovalbumin conjugate.

Specificity

The specificity of the antibody has been tested by competitive ELISA; binding was inhibited by 5-Bromo-2'-deoxyuridine, 5-Chloro-2'-deoxyuridine and 5-Iodo-2'-deoxyuridine. No cross-reactivity was

observed with 5-Fluoro-2'-deoxyuridine or Thymidine.

Reagent preparation

To prepare working strength solution, reconstitute one vial of freeze-dried nuclease with 4 ml of distilled/deionized water. Add 40 µl of the concentrated antibody and gently mix.

Once reconstituted, the antibody/nuclease solution must be stored at 2–8°C and used within 4 weeks. This solution is ready to use and does not require further dilution.

Applications

The monoclonal antibody to Bromo-deoxyuridine is supplied in the same formulation used in the GE Healthcare cell proliferation kit (RPN20). Once prepared, the reagent contains a nuclease to produce single stranded DNA which is easily accessible to the antibody without the need for chemical denaturation. This enables detection of cell proliferation while maintaining excellent cell morphology (1, 2). The improved preservation of antigens also allows double immunocytochemical staining studies to be carried out (3).

The antibody/nuclease mixture may be used for the study of cell proliferation when a choice of detection system is required. This reagent is compatible with the large range of detection systems available from GE Healthcare, including fluorescent labelled antibodies and Biotin-Streptavidin detection reagents.

Use

1. Label proliferating cells using Bromo-deoxyuridine/Fluoro-deoxyuridine labelling reagent (RPN201 or RPN20).
2. Process specimen for immunocytochemistry.
3. Cover specimen with reconstituted anti-Bromo-deoxyuridine/nuclease solution and incubate for 1 hour at room temperature.
4. Wash 3 x 3 minutes with Phosphate Buffered Saline.
5. Apply detection system.

References

1. Gratzner, H.G., *Science*, **218**, 474 (1982).
2. Gonchoroff, N.J. *et al.*, *J.Immunol.Methods*, **93**, 97-101 (1986).
3. Campana, D. *et al.*, *J.Immunol.Methods*, **107**, 79-88 (1988).

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