3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Anti-Biotin antibody, Mouse monoclonal
clone BN-34, purified from hybridoma cell culture

Catalog Number **SAB4200680**

Product Description

Anti-Biotin (mouse IgG1 isotype) is derived from the BN-34 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from mouse immunized with biotinylated KLH. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Anti-Biotin recognizes the free biotin molecule and biotin conjugated to various proteins, specifically immunoglobulins, in ELISA and immunohistochemical techniques. Specificity was verified by using biotinylated goat antibodies reactive against human and rabbit antigens coated on microtiter plates. Monoclonal Anti-Biotin may be used in a various immunochemical techniques including Western blotting, Immunoprecipitation, Immunocytochemistry, in-situ nucleic acids hybridization and ELISA.[1-4]

Biotin is an essential vitamin required by cells in living organisms or in culture. The high binding affinity to egg white avidin or bacteria-derived streptavidin has been exploited in the design of immunoassays and immunohistologic staining techniques.[5] The most popular procedure involves localization of the antigen with a primary antibody, addition of a biotinylated antibody to bind to the primary antibody, application of a complex of avidin and biotinylated enzyme (usually horseradish peroxidase) and finally, reaction with a chromogenic substrate.[6-7] Using Monoclonal Anti-Biotin results in enhanced sensitivity to detect smaller amounts of antigen or to localize low density antigens in histologic sections. Furthermore, avidin-biotin immunoassays methods offer improved sensitivity by bridging a second layer of avidin-biotin-enzyme complex.[7-8] This antibody can be also used in many other applications where biotin can be introduced as a target label. This is demonstrated in detection of low copy human papilloma virus DNA and mRNA in routine paraffin sections of cervix by sensitive non-isotopic in-situ hybridization[9] and for the detection of microinjected biotin-haptenized cytoskeletal proteins to directly examine the pattern of incorporation and turnover of cytoskeletal proteins in living cells.[10]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Indirect ELISA: recommended using rabbit IgG at 10 μg/ml as coat; Biotinylated-Goat-Anti-Rabbit IgG (Cat. No. B8895) as primary antibody; monoclonal Anti-Biotin antibody (Cat. No. SAB4200680) at 0.15-0.3 μg/mL as secondary antibody followed by detection with Anti-Mouse IgG (Fab specific)–Peroxidase (Cat. No. A9917).

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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