ProductInformation

MONOCLONAL ANTI-RAT IgG2b
Clone R2B-9
Mouse Ascites Fluid

Product Number **R 1011**

Product Description

Monoclonal anti-Rat IgG2b (mouse IgG1 isotype) is derived from the R2B-8 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with purified rat IgG. The isotype is determined using the Sigma ImmunoType Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Rat immunoglobulins are subdivided into five classes; IgM, IgG, IgA, IgE, IgD and four IgG subclasses; IgG1, IgG2a, IgG2b, and IgG2c, on the basis of the structural, biological, physiochemical, and electrophoretic properties of their heavy chains.[1] The rat has been extensively used as a research model in pharmacology, oncology, and the study of the immunology of aging. Rat polyclonal and monoclonal antibodies[2,3] have come into widespread use as primary antibodies. Secondary antibodies to rat immunoglobulin subclasses may be particularly valuable in double labeling experiments and for isotyping and immunoaffinity purification of rat-derived antibodies. Anti-rat antibodies are commonly produced by xenogeneic immunization of rabbits, goats or sheep, resulting in antibodies that cross-react with other immunoglobulin subclasses of rat and of other species, unless extensively adsorbed. Monoclonal anti-rat immunoglobulins which are devoid of any binding capacity to human and many other species, can serve as an essential tool in many applications, especially when used as a secondary reagent in immunohistochemistry.

Reagents

The product is provided as ascites fluid with 0.1% sodium azide as a preservative.

Precautions and Disclaimer

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.

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. Storage in "frost-free" freezers is **not** recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

Monoclonal anti-Rat IgG2b recognizes an epitope located on the heavy chain of rat IgG2b. The antibody detects the rat IgG2b derived from normal serum or myeloma proteins, but not the other rat immunoglobulins. It localizes the denatured-reduced heavy chain molecule of rat IgG2b (γ2b), when applied in immunoblotting. Weak cross-reaction is observed with guinea pig immunoglobulins, but not with IgG and serum preparations of bovine, cat, chicken, dog, goat, horse, human, mouse, pig, rabbit, or sheep when tested by indirect ELISA and dot blot techniques. The antibody is also applicable as a secondary antibody in immunohistochemistry of human tissue where it does not react against the tissue itself.

Monoclonal anti-Rat IgG2b is a homogenous population of antibody molecules which may be used for the localization of rat IgG2b, using various immunochemical assays such as ELISA, immunoblot, dot blot, or immunocytochemistry.

In order to obtain best results in different techniques and preparations, it is recommend that each individual user determine their optimum working dilutions by titration assay.

Note: Second antibodies against mouse immunoglobulins may cross-react with the rat protein coated on the microtiter plate, unless properly adsorbed with rat immunoglobulins.

References

1. Bazin, H., et al., Eur. J. Immunol., **4**, 44 (1974).
2. Springer, T.A., et al., Hybridoma, **1**, 257 (1982).
3. Bazin, H., (ed.) " Rat Hybridomas and Rat Monoclonal Antibodies", CRC Press, Boca Raton Florida (1990).

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