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Product Information

Monoclonal Anti-Human IgM (μ-chain specific)-Peroxidase
produced in mouse, clone MB-11, purified immunoglobulin

Product Number **SAB4200748**

Product Description

Monoclonal Anti-Human IgM (mouse IgG2b isotype) is derived from the MB-11hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with purified human IgM protein. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is a purified immunoglobulin conjugated to horseradish peroxidase.

Monoclonal Anti-Human IgM (μ-chain) specifically recognizes μ chain of Human IgM. The antibody shows no cross-reactivity with human IgG, Fab, Fc, κ, λ and γ chains. The antibody is recommended to use in various immunological techniques, including ELISA.

Immunoglobulin M (IgM) is the major class of surface immunoglobulinson lymphocytes membranes. IgM is suggested to act as the first line of defense during microbial infections. IgM has a pentameric structure, in which monomers are linked together via disulphide bonds.[1] Surface IgM is expressed on immature and mature B cells, whereas IgM heavy chain is expressed intracellularly in pre-B cells. IgM serves as the antigen receptor of naive B cells and is involved in B cell maturation and complement activation.[2]

Detection of specific IgM antibodies is commonly used in clinical diagnostics. For example, presence of IgM antibodies in a patient's serum may indicates on a recent infection and IgM in a neonate's serum may indicate on intrauterine infection (e.g. congenital rubella syndrome).[3] In addition, the development of anti-donor IgM after combined liver-kidney transplantation has been shown to provide a graft- protecting effect.[4] Anti-Human IgM (μ-specific) antibodies can be used in detection of the abnormal concentration of IgM in patient sera and IgM-associated pathologies, such as selective IgM immunodeficiency (SIgMD) and the hyperimmunoglobulin M (hyper-IgM or HIGM) syndromes.[5-6]

Reagent

Supplied as a lyophilized powder.

Preparation Instructions

Reconstitute the content of the vial with 0.25 mL of distilled water to a final antibody concentration of ~2 mg/mL. After reconstitution, the solution contains 1% BSA, 2.5% trehalose, 0.05% MIT in 0.01 M sodium phosphate buffered saline.

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

Store the lyophilized product at 2–8 °C. For extended storage after reconstitution, keep at –20 °C in working aliquots. Avoid repeated freeze-thaw cycles. For continuous use after reconstitution, keep at 2–8 °C for up to 1 month. Solutions at working dilution should be discarded if not used within 12 hours.

Product Profile

Direct ELISA: a working dilution of 1:40,000-1:80,000 is recommended using 2.5 μg/mL human IgM for coating.

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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4. McAlister CC., et al., *Liver Transplant*., **10**, 315-9 (2004).
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