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| **Description** | **Horseradish peroxidase-conjugated IgG fraction of polyclonal rabbit antiserum to bovine IgM, Fc specific** |
| **Product code** | RAB/IgM(Fc)/PO |
| **Biological origin** | Rabbit |
| **Physical form** | Peroxidase-coupled purified hyperimmune rabbit IgG lyophilized from a solution in phosphate buffered saline (PBS, pH 7.2). |
| **Preservative** | No preservative added, as it may interfere with the antibody activity. |
| **Immunogen** | Purified normal IgM isolated from pooled bovine serum. Freund's complete adjuvant is used in the first step of the immunization procedure. |
| **Purification** | Hyperimmune antisera with strong precipitating activity are selected for fractionation by salt-precipitation and purification of the IgG fraction by DEAE-chromatography. |
| **Adsorption** | Immunoaffinity adsorbed using insolubilized antigens as required to eliminate antibodies cross-reacting with other components of the immunoglobulin system or reacting with other serum proteins. Special attention is given to the removal of antibodies to common Ig/Fab. The use of insolubilized adsorption antigens prevents the presence of excess adsorbent protein or immune complexes in the antiserum. |
| **Identity & Specificity** | The reactivity of the antiserum is directed to the Fc subunit of the IgM molecule which expresses strict isotypic (class) specificity. It does not react with any non-Ig protein in bovine serum, as tested by immunoelectrophoresis and double radial immunodiffusion. |
| **Cross-reactivity** | Inter-species cross-reactivity is a normal feature of antibodies to immunoglobulins, since Ig of different species frequently share antigenic determinants. Cross-reactivity of this antiserum has not been tested in detail, however a strong reaction with sheep IgM has been observed. |
| **Physicochemical characteristics** | IgG protein concentration 10 mg/ml. Peroxidase/IgG protein molar ratio (E/P) is approximately 1.7. No foreign proteins added. |
| **Enzyme marker** | Horseradish peroxidase enriched for isoenzyme C (RZ=3.2) |
| **Conjugation procedure** | Conjugation is carried out using a proprietary modification of the periodate technique for the binding to peroxidase, followed by several purification steps. After each step activity and specificity are tested in a variety of techniques. The conjugate is lyophilized to assure stability and long shelf life. |
| **Intended use** | In enzyme-immunocytochemical and immunohistochemical staining for the detection of IgM at the cellular and subcellular level by staining of appropriately treated cell and tissue substrates; to demonstrate circulating IgM antibodies in serodiagnostic microbiology and autoimmune diseases; to identify a specific antigen using a reference antibody of bovine origin known to be of the IgM isotype in the middle layer of the indirect test procedure; in non-isotopic assay methodology (e.g. ELISA) to measure IgM in bovine serum or other body fluids.<br>*This immunoconjugate is not pre-diluted. The optimum working dilution of each conjugate should be established by titration before being used. Excess labelled antibody must be avoided because it may cause high unspecific background staining and interfere with the specific signal.*<br>Working dilutions for histochemical and cytochemical use are usually between 1:50 and 1:250; in ELISA and comparable non-precipitating antibody-binding assays between 1:500 and 1:2,000. |
| **Handling** | The lyophilized conjugate is shipped at ambient temperature and may be stored at +4°C; prolonged storage at or below -20°C. It is reconstituted by adding 1 ml sterile distilled water, spun down to remove insoluble particles, divided into small aliquots, frozen and stored at or below -20°C. Prior to use, an aliquot is thawed slowly at ambient temperature, spun down again and used to prepare working dilutions by adding sterile phosphate buffered saline (PBS, pH 7.2). Repeated thawing and freezing should be avoided. Working dilutions should be stored at +4°C, not refrozen, and preferably used the same day. If a slight precipitation occurs upon storage, this should be removed by centrifugation. It will not affect the performance of the immunoconjugate. |
| **Packing** | Vial with 1 ml lyophilized immunoconjugate. |
| **Storage / shelf life** | Lyophilized at +4°C — at least 10 years<br>reconstituted at or below -20°C — 3-5 years<br>reconstituted at +4°C — 7 days |
| **Caution** | This immunoconjugate should be handled by qualified persons only and appropriate precautions should be taken in its handling and disposal, and of all associated materials. For *in vitro* laboratory research purposes only. |

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