



MONOCLONAL ANTI-SPECTRIN (α and β)

Clone SB-SP1

Mouse Ascites Fluid

Product Number **S 3396**

Product Description

Monoclonal anti-Spectrin (α and β) (mouse IgG1 isotype) is produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified human erythroid spectrin was used as the immunogen. The isotype is determined by a double diffusion assay using immunoglobulin and subclass specific antisera.

Monoclonal anti-Spectrin (α and β) specificity was established by an immunoblotting technique. The antibody localizes the 220 kDa (β) and 240 kDa (α) bands of human erythrocyte spectrin staining the β subunit stronger than the α subunit at the recommended titer. In addition, a number of polypeptides in the region of 170, 150, 85, and 45 kDa will react with the antibody. It is likely these lower molecular weight polypeptides may have an epitope shared by both the α and β subunits of spectrin. By immunofluorescence the antibody will stain human spectrin in erythrocyte smears.

Spectrin is a major constituent of the erythrocyte skeleton accounting for 25% of the total membrane protein and 75% of the cytoskeletal mass. It is associated with the cytoplasmic surface of the membrane by attachment to ankyrin, a peripheral membrane protein. The membrane skeleton influences several cellular properties such as cell shape, restriction of mobility of the integral membrane protein exposed at the cell surface and transmembrane movement of phospholipids and cholesterol. While the simplest form of spectrin in solution is an α - β heterodimer, spectrin can undergo reversible self-association in various conditions to form a tetramer of α_2 - β_2 . In recent years a large number of spectrin-like molecules have been found in non-erythroid cells. These proteins are known by such different names as fodrin, CBP I, calspectin and TW 260/240. On SDS-PAGE gels, erythrocyte spectrin appears as two closely spaced bands of 240 kDa and 220 kDa

Product Information

referred to as the α -chain (subunit/band 1) and β -chain (subunit/band 2) respectively.

Monoclonal anti-Spectrin may be used in the study of the erythrocyte membrane skeleton and its abnormalities such as spectrin deficiency in hereditary spherocytosis.

Reagents

The product is provided as ascites fluid containing 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 hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, the solution may be frozen 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

The antibody titer (at least 1:500) was determined by an immunoblot using an extract of human erythrocyte ghosts or purified human erythrocyte spectrin and immunoperoxidase labeling. In order to obtain best results it is recommended that each individual user determine optimum working dilution by a titration assay.

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