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Product Information

Monoclonal Anti-Human Fibroblast Surface Protein Clone 1B10

Immunoglobulin Fraction of Mouse Ascites Fluid

Product No. **F 4771**

Product Description

Monoclonal Anti-Human Fibroblast Surface Protein (mouse IgM isotype) is derived from the 1B10 hybridoma¹ produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with cultured human thymic fibroblasts. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-Human Fibroblast Surface Protein may be used for the control of fibroblast growth in culture, flow cytometry, immunohistochemistry, and immunoblotting.

Monoclonal Anti-Human Fibroblast Surface Protein¹ recognizes surface protein on human fibroblasts and fibroblast cell lines, as well as tissue macrophages and 95% of peripheral blood monocytes. This fibroblast antigen has also been demonstrated on malignant fibrosarcoma tissue. Human synovial, foreskin and thymic fibroblasts all express the antigen. It is absent on human epithelial cells and lymphocytes. The antigen detected by this monoclonal antibody has been described to be of molecular weight 43 kDa and 72-80 kDa by Western blot analysis.¹ No correlation to known clusters of differentiation has been established (in the Third International Leucocyte Differentiation Workshop, 1987).² Due to its specific reaction against human fibroblasts, the antibody is useful for removal of fibroblasts from human cultured cells by inhibition of fibroblasts adherence to the culture vessel or by cytotoxic effect in the presence of rabbit complement. It is also useful in immunohistological staining of frozen sections of human tissue and in flow cytometry of human fibroblasts and monocytes.¹

Overgrowth of epithelial cells by fibroblasts has long been an obstacle to cultivation of normal and abnormal epithelial cells.³⁻⁵ In addition, apart from the functional significance of cells characteristics, the characterization of cell lines is important for correlation of cultures with tissue origin, identification of the lineage to which the

cells belong or the precursor status of the cells. Monoclonal antibodies to fibroblast surface protein should provide a powerful tool for control of fibroblast growth in a variety of human cell culture systems, such as thymic epithelial (TE) cell cultures allowing the growth of highly enriched populations of the TE cells.⁶ It is also useful for flow cytometry, immunohistochemistry and immunoblotting.¹

Reagents

The product is provided as the immunoglobulin fraction of mouse ascites fluid in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA and 0.1% sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety 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.

Product Profile

Antibody Concentration: 0.2 mg/ml

Titer: Minimum 1:500

The antibody titer was determined by complement-mediated microcytotoxicity assay using cultured human foreskin fibroblasts and rabbit complement. At the above antibody dilution more than 90% of the cells are affected by the antibody-complement treatment.

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

Storage

For extended storage, freeze in working aliquots. For continuous use, store at 2-8 °C for up to one month. 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.

References

1. Singer, K., et al., J. Invest. Dermatol., **92**, 166 (1989).
2. Hogg, N., and Horton, M., Myeloid Antigens. New and previously defined clusters, in: Leukocyte Typing III. McMichael, A., Ed., pp 576-602, Oxford University Press, Oxford (1987).
3. SunderRaj, N., et al., Curr. Eye Res., **3**, 637 (1984).
4. Singer, K., et al., Human Immunol., **13**, 161 (1985).
5. Abbond, C., et al., Blood, **68**, 1196 (1986).
6. Le, P., et al., J. Immunol., **145**, 3310 (1990).

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