

## Monoclonal Antibody to Fibroblasts / Epithelial Cells - Purified

<b>Alternate names:</b>	Fibroblast Marker, Fibroblasten
<b>Catalog No.:</b>	SM1214PT
<b>Quantity:</b>	25 µg
<b>Concentration:</b>	1.0 mg/ml
<b>Background:</b>	A fibroblast is a connective-tissue cell of mesenchymal (somewhat undifferentiated) origin that secretes proteins from which the extracellular fibrillar matrix of connective tissue forms. Epithelial cells are cells that cover the surface of the body and line its cavities.
<b>Host / Isotype:</b>	Mouse / IgG2a
<b>Recommended Isotype Controls:</b>	AM03096PU-N
<b>Clone:</b>	D7-FIB
<b>Immunogen:</b>	Human foreskin Fibroblasts. Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2 myeloma cell line.
<b>Format:</b>	<b>State:</b> Liquid purified IgG fraction from Tissue Culture Supernatant <b>Purification:</b> Affinity Chromatography on Protein G <b>Buffer System:</b> PBS containing 0.09% Sodium Azide as preservative
<b>Applications:</b>	<b>Flow Cytometry:</b> Use 10 µl of a 1/50-1/200 diluted antibody to label 10 <sup>6</sup> cells in 100 µl. This product is routinely tested on the KG1 cell line. <b>Immunohistochemistry on Frozen Tissues or Cells:</b> 1/100. This antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Use ice-cold methanol for 5 min or acetone as fixative. <b>Does not work on Paraffin Sections.</b> <b>Immunoprecipitation.</b> Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	SM1214P recognizes a 112 kD molecule expressed on the cell surface of human fibroblasts and epithelial cells. In peripheral blood the antibody stains myeloid cells and a very small number of lymphocytes. Studies upon the antigen have shown it to be sensitive to SDS but resistant to trypsin, tunicamycin and collagenase. In immunohistochemical studies the antibody has also been found to bind to epithelium, myoepithelium, smooth muscle cells and some leucocytes. D7-FIB has been shown to be useful as a cell membrane marker to characterize chondrocyte differentiation giving a positive reaction with dedifferentiated human chondrocytes, and negative with differentiated chondrocytes (Van Osch et al., 2001).

**Negative Species:** Mouse, Rat.

**Species Reactivity:** **Tested:** Human.

**Storage:** Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.  
Avoid repeated freezing and thawing.  
Shelf life: one year from despatch.

**Product Citations:** **Purchased from Acris:**

1. Nazareth MR, Broderick L, Simpson-Abelson MR, Kelleher RJ, Yokota SJ, Bankert RB. Characterization of human lung tumor-associated fibroblasts and their ability to modulate the activation of tumor-associated T cells. *J Immunol.* 2007 May 1;178(9):5552-62. PubMed PMID: 17442937.

**General Readings:**

1. Fearn C, Dowdle EB. The desmoplastic response: induction of collagen synthesis by melanoma cells in vitro. *Int J Cancer.* 1992 Feb 20;50(4):621-7. PubMed PMID: 1537627.
2. Kelynack KJ, Hewitson TD, Nicholls KM, Darby IA, Becker GJ. Human renal fibroblast contraction of collagen I lattices is an integrin-mediated process. *Nephrol Dial Transplant.* 2000 Nov;15(11):1766-72. PubMed PMID: 11071963.
3. van Osch GJ, van der Veen SW, Marijnissen WJ, Verhaar JA. Monoclonal antibody 11-fibrau: a useful marker to characterize chondrocyte differentiation stage. *Biochem Biophys Res Commun.* 2001 Jan 26;280(3):806-12. PubMed PMID: 11162592.
4. Behl, B. et al. (2013) Biological effects of cobalt-chromium nanoparticles and ions on dural fibroblasts and dural epithelial cells. *Biomaterials.* pii: S0142-9612(13)00039-2.
5. Morito T, Muneta T, Hara K, Ju YJ, Mochizuki T, Makino H, et al. Synovial fluid-derived mesenchymal stem cells increase after intra-articular ligament injury in humans. *Rheumatology (Oxford).* 2008 Aug;47(8):1137-43. doi: 10.1093/rheumatology/ken114. Epub 2008 Apr 5. PubMed PMID: 18390894.
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10. Nimura A, Muneta T, Koga H, Mochizuki T, Suzuki K, Makino H, et al. Increased proliferation of human synovial mesenchymal stem cells with autologous human serum: comparisons with bone marrow mesenchymal stem cells and with fetal bovine serum. *Arthritis Rheum.* 2008 Feb;58(2):501-10. doi: 10.1002/art.23219. PubMed PMID: 18240254.
11. Miranda-Carús ME, Balsa A, Benito-Miguel M, De Ayala CP, Martín-Mola E. Rheumatoid arthritis synovial fluid fibroblasts express TRAIL-R2 (DR5) that is functionally active. *Arthritis Rheum.* 2004 Sep;50(9):2786-93. PubMed PMID: 15457446.
12. Petrow PK, Wernicke D, Schulze Westhoff C, Hummel KM, Bräuer R, Kriegsmann J, et al. Characterisation of the cell type-specificity of collagenase 3 mRNA expression in comparison with membrane type 1 matrix metalloproteinase and gelatinase A in the synovial membrane in rheumatoid arthritis. *Ann Rheum Dis.* 2002 May;61(5):391-7. PubMed PMID: 11959761.

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**Pictures:**

**Flow Cytometry:** Staining of KG1 cells with Mouse anti Human fibroblast antibody.

