Fibroblast Marker clone ER-TR7

Instructions for Use

Specification:
Fibroblast cells synthesize and maintain the extracellular matrix in a wide variety of mammal tissues. Fibroblasts provide a structural framework for many tissues and play an important role in wound healing. They are continuously secreting precursors of the extracellular matrix, specifically the collagens, glycosaminoglycans, reticular and elastic fibers and glycoproteins. Fibroblasts are morphologically heterogeneous and are not restricted by a polarizing attachment to a basal lamina. Fibroblasts have a branched cytoplasm surrounding an elliptical, speckled nucleus having one or two nucleoli. Fibroblasts proliferate easily, making them a popular cell type for cell cultures in biological research. Fibroblast markers can aid in the identification and behavioral analysis of these cells. The intermediate filament protein vimentin, for example, is expressed on Fibroblast cells, and it is used as a marker to distinguish the mesodermal origin of the cells.

Availability:

Catalog No.	Contents	Volume
ILM76619-C01	Fibroblast Marker	0,1 ml concentrate
ILM76619-C05	Fibroblast Marker	0,5 ml concentrate
ILM76619-C1	Fibroblast Marker	1,0 ml concentrate

Intended use: For Research Use Only

Reactivity: Human, Rat, Mouse

Clone: ER-TR7

Species of origin: Rat

Isotype: IgG2a

Control Tissue: thymic reticulum of mouse origin

Staining: Cytoplasmic

Presentation: antibody in PBS with < 0.1% sodium azide and 0.1% gelatin

Application and suggested dilutions:
Pretreatment: Heat induced epitope retrieval in 10 mM citrate buffer, pH6.0, or in 50 mM Tris buffer pH9.5, for 20 minutes is required for IHC staining on formalin-fixed, paraffin embedded tissue sections.

- Immunohistochemical staining of formalin-fixed, paraffin embedded tissue section (dilution 1:100)
- Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000)
- Immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500)
- Flow cytometry (1 µg per 1 x 10^{6} cells)
- Immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500)

The optimal dilution for a specific application should be determined by the investigator.

Note: Dilution of the antibody in 10% normal goat serum followed by a goat anti-mouse secondary antibody-based detection is recommended

Storage & Stability: Store at 2-8 °C. Do not use after expiration date printed on the vial.

References:

1) Strutz, F., et al. 1995. Identification and characterization of a Fibroblast Marker: FSP1. J. Cell Biol. 130: 393-405.
2) Sun, S., et al. 2002. Expression, purification and kinetic characterization of full-length human fibroblast activation protein. Protein Expr. Purif. 24: 274-281.
3) Sun, S., et al. 2004. Human fibroblast migration in three-dimensional collagen gel in response to noninvasive electrical stimulus. I. Characterization of induced three-dimensional cell movement. Tissue Eng. 10: 1548-1557.
4) Ding, L., et al. 2005. Molecular characterization of the cytotoxic mechanism of multiwall carbon nanotubes and nano-onions on human skin fibroblast. Nano Lett. 5: 2448-2464.
5) Schäfer, A., et al. 2006. Influence of Myosin II activity on stiffness of fibroblast cells. Acta Biomater. 1: 273-280.
6) Ding, S.H., et al. 2006. High-level expression of basic fibroblast growth factor in transgenic soybean seeds and characterization of its biological activity. Biotechnol. Lett. 28: 869-875.
7) Hou, T., et al. 2006. Morphologies of fibroblast cells cultured on surfaces of PHB films implanted by hydroxyl ions. J. Biomater. Sci. Polym. Ed. 17: 735-746.
8) Jie, G., et al. 2006. Free radical scavenging effect of Pu-erh tea extracts and their protective effect on oxidative damage in human fibroblast cells. J. Agric. Food Chem. 54: 8058-8064.
9) Revell, C.M., et al. 2006. Characterization of fibroblast morphology on bioactive surfaces using vertical scanning interferometry. Matrix Biol. 25: 523-533.