SANTA CRUZ BIOTECHNOLOGY, INC.

Fibroblast Marker (ER-TR7): sc-73355

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fibroblast cells synthesize and maintain the extracellular matrix in a wide variety of mammal tissues. Fibroblasts provide a structural framework for many tissues and also 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.

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.

SOURCE

Fibroblast Marker (ER-TR7) is a rat monoclonal antibody raised against a thymic reticulum of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Fibroblast Marker (ER-TR7) is available conjugated to agarose (sc-73355 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-73355 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-73355 PE), fluorescein (sc-73355 FITC), Alexa Fluor® 488 (sc-73355 AF488), Alexa Fluor® 546 (sc-73355 AF546), Alexa Fluor® 594 (sc-73355 AF594) or Alexa Fluor® 647 (sc-73355 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-73355 AF680) or Alexa Fluor® 790 (sc-73355 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

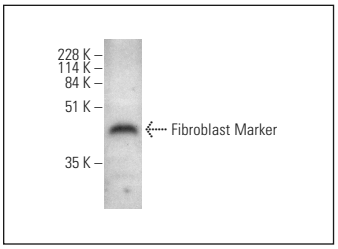
Fibroblast Marker (ER-TR7) is recommended for detection of reticular fibroblasts of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells); non cross-reactive with purified Laminin, Collagen Types I-V, Fibronectin or Nidogen.

Positive Controls: 3611-RF whole cell lysate: sc-2215.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Fibroblast Marker (ER-TR7) HRP: sc-73355 HRP. Direct western blot analysis of Fibroblast Marker expression in 3611-RF whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wu, M., et al. 2009. β-defensins 2 and 3 together promote resistance to *Pseudomonas aeruginosa* keratitis. J. Immunol. 183: 8054-8060.
2. Omatsu-Kanbe, M., et al. 2014. Prion protein- and cardiac troponin T-marked interstitial cells from the adult myocardium spontaneously develop into beating cardiomyocytes. Sci. Rep. 4: 7301.
3. Skogberg, G., et al. 2015. Human thymic epithelial primary cells produce exosomes carrying tissue-restricted antigens. Immunol. Cell Biol. 93: 727-734.
4. Tostanoski, L.H., et al. 2016. Reprogramming the local lymph node microenvironment promotes tolerance that is systemic and antigen specific. Cell Rep. 16: 2940-2952.
5. Lundell, A.C., et al. 2017. IFN type I and II induce BAFF secretion from human decidual stromal cells. Sci. Rep. 7: 39904.
6. Mikawa, R., et al. 2018. Elimination of $p19^{ARF}$-expressing cells protects against pulmonary emphysema in mice. Aging Cell 17: e12827.
7. Chung, K.P., et al. 2019. Mitofusins regulate lipid metabolism to mediate the development of lung fibrosis. Nat. Commun. 10: 3390.
8. Toyosaki, M., et al. 2020. Dermal fibroblast-like cells reprogrammed directly from adipocytes in mouse. Sci. Rep. 10: 21467.
9. Keum, H., et al. 2021. A bilirubin-derived nanomedicine attenuates the pathological cascade of pulmonary fibrosis. Biomaterials 275: 120986.
10. Sun, C., et al. 2022. Human pluripotent stem cell-derived myogenic progenitors undergo maturation to quiescent satellite cells upon engraftment. Cell Stem Cell 29: 610-619.e5.

RESEARCH USE

For research use only, not for use in diagnostic procedures.