



CARDIAC FIBROBLAST DERIVED EXTRACELLULAR MATRIX

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The Invention

UW-Madison researchers have discovered a novel marker in cardiac fibroblasts and myofibroblasts that reliably predicts extracellular matrix production in cultured cardiac fibroblasts. Sushi Domain Containing protein 2 (SUSD2) is type 1 transmembrane protein that was unknown in CFs prior to the inventors' 2021 publication. SUSD2 has been reported in several cancer types as well as endometrial mesenchymal stromal cells. Little is known about the function of SUSD2 or in its expression pattern in cells and tissues of the body. Interestingly, the inventors have discovered that although culture-expanded CFs express SUSD2, the expression level is variable, and there are SUSD2High and SUSD2Low CFs. Using cell sorting flow cytometry, the inventors sorted out the SUSD2High and SUSD2Low CF populations, and surprisingly found that SUSD2Low CFs do not form intact CF-ECM scaffolds whereas SUSD2High CFs form robust intact CF-ECM scaffolds. This finding has been reproduced in multiple CF lines.

Additional Information

For More Information About the Inventors

- [Amish Raval](#)

Tech Fields

- [Pluripotent Stem Cells : General pluripotent cell technologies](#)
- [Therapeutics & Vaccines : Cardiovascular](#)

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