

ASC/TERT1

Telomerized human adipose-derived mesenchymal stem cells

- Study of differentiation processes
- Research on inflammation as well as tissue homeostasis and repair
- Development of novel therapies using MSC-secreted vesicles

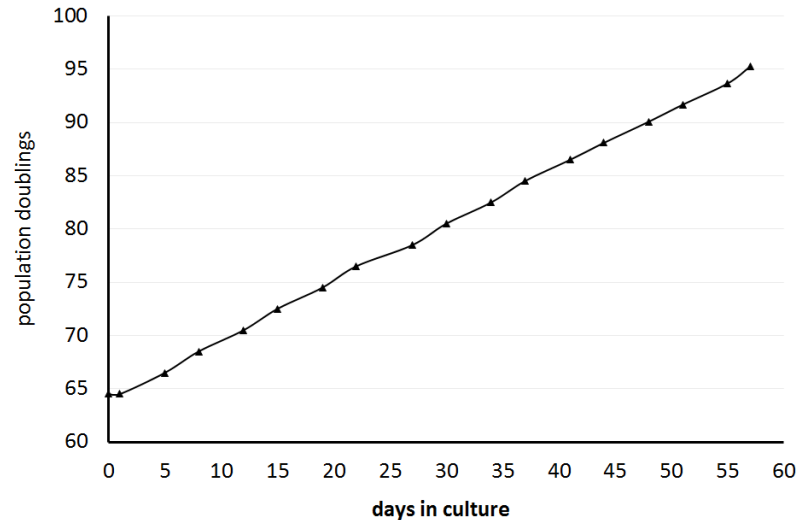


Key characteristics

Growth characteristics and morphology

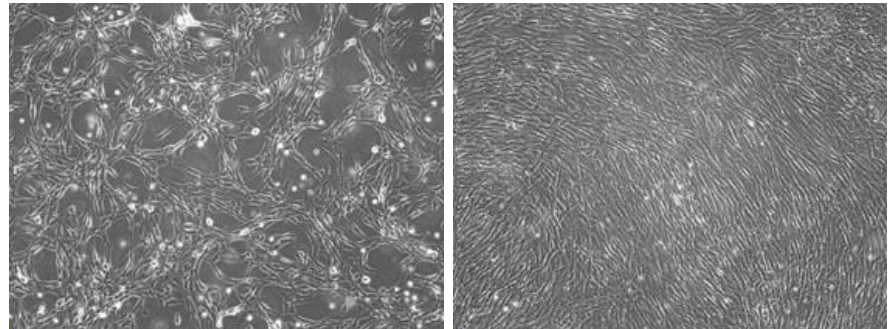
Continuous growth in vitro

ASC/TERT1 cells have been established by overexpression of the catalytic subunit of human telomerase in adipose tissue derived mesenchymal stem cells. The cells can be grown for a minimum of 30 population doublings after thawing without showing signs of growth retardation. The cells show a constant growth rate with a population doubling time of 36-48 hours.



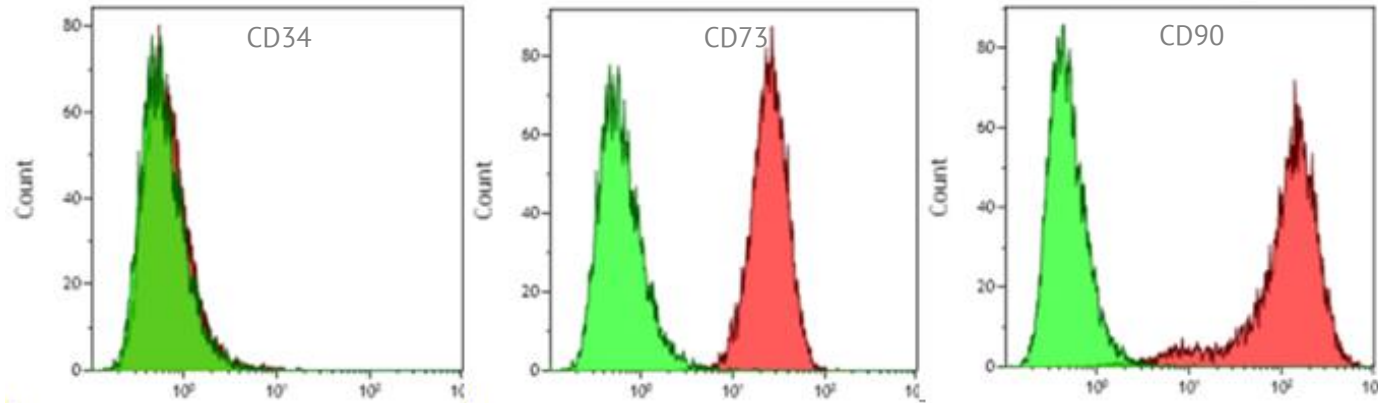
Morphology in vitro

ASC/TERT1 cells are characterized by the typical spindle-shaped morphology of mesenchymal stem cells.

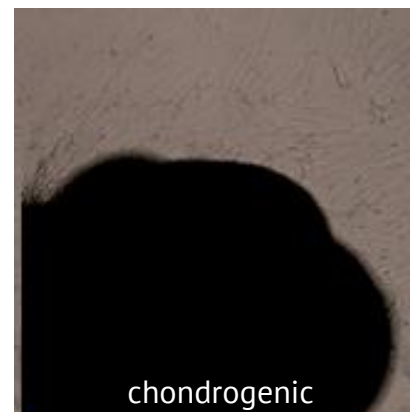
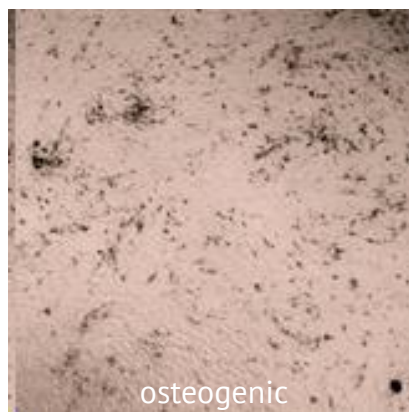
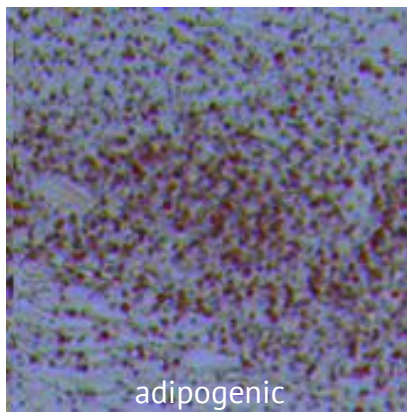


Key characteristics

Marker expression and differentiation



ASC/TERT1 cells show expression of typical MSC markers such as CD73, CD90, whereas CD34 is not detected (green: isotype control, red: specific staining).



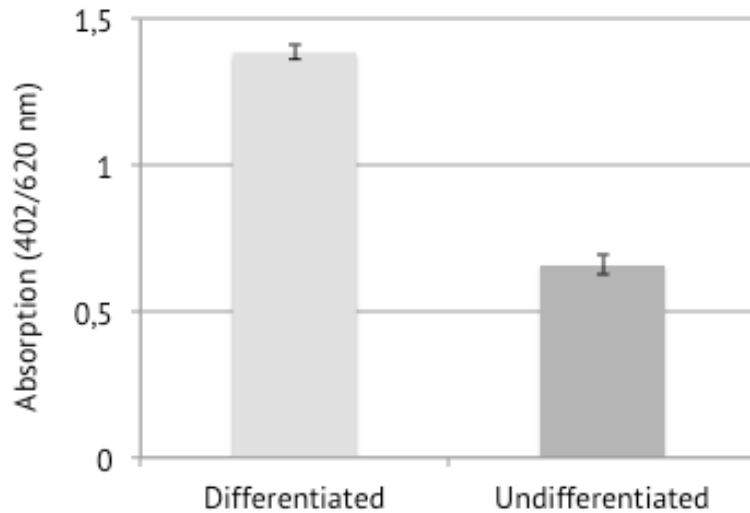
ASC/TERT1 cells can be differentiated towards the adipogenic, osteogenic and chondrogenic lineage.



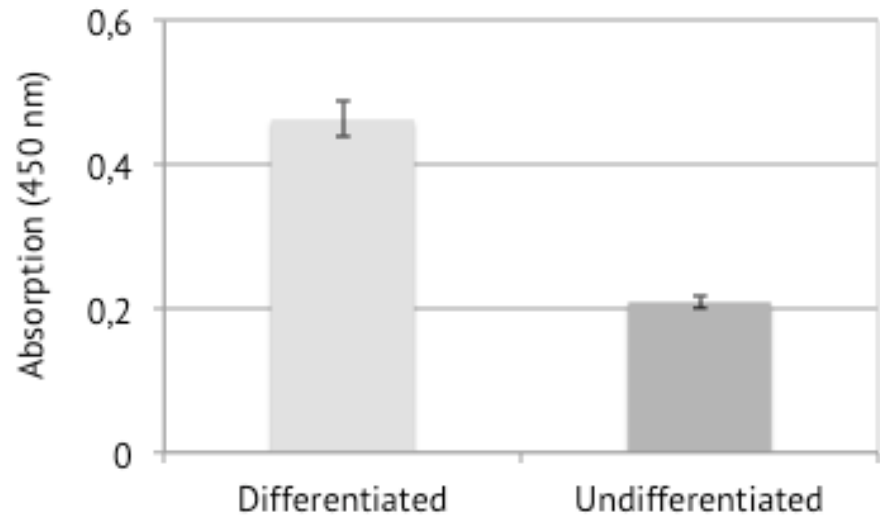
Key characteristics

Osteogenic differentiation

ALP



Alizarin Red



ASC/TERT1 cells were induced to differentiate towards the osteogenic lineage followed by alkaline phosphatase (ALP, left) and Alizarin Red staining (right). A significant increase in ALP as well as Alizarin Red staining was observed when compared to undifferentiated ASC/TERT1 cells.



Key characteristics

RNA and protein expression data



- Current collaboration with the Human Protein Atlas
- NGS data on 6 exponentially growing Evercyte cell lines
<http://www.proteinatlas.org/learn/cellines>

THE HUMAN PROTEIN ATLAS



Key publications



Wolbank S, Stadler G, Peterbauer A, Gillich A, Karbiener M, Streubel B, Wieser M, Katinger H, van Griensven M, Redl H, Gabriel C, Grillari J, Grillari-Voglauer R. Telomerase immortalized human amnion- and adipose-derived mesenchymal stem cells: maintenance of differentiation and immunomodulatory characteristics. *Tissue Eng Part A*. 2009 Jul;15(7):1843-54. doi: 10.1089/ten.tea.2008.0205. [PMID 19125642]





Expertise and enthusiasm for your aims!

Contact

Regina Grillari, CTO and Co-founder
Evercyte GmbH, Muthgasse 18, 1190 Vienna, Austria
FN 358620 h, HG Wien, UID/VAT: ATU66244913

regina.grillari@evercyte.com

