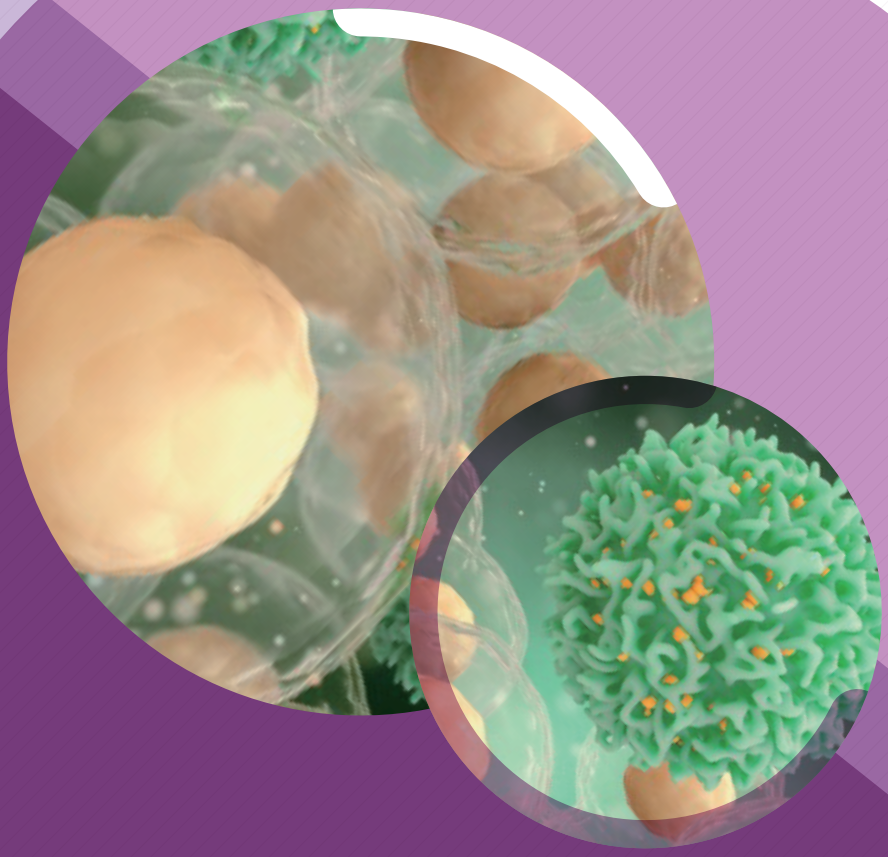
Creative Bioarray



Immortalized Human Stem Cells

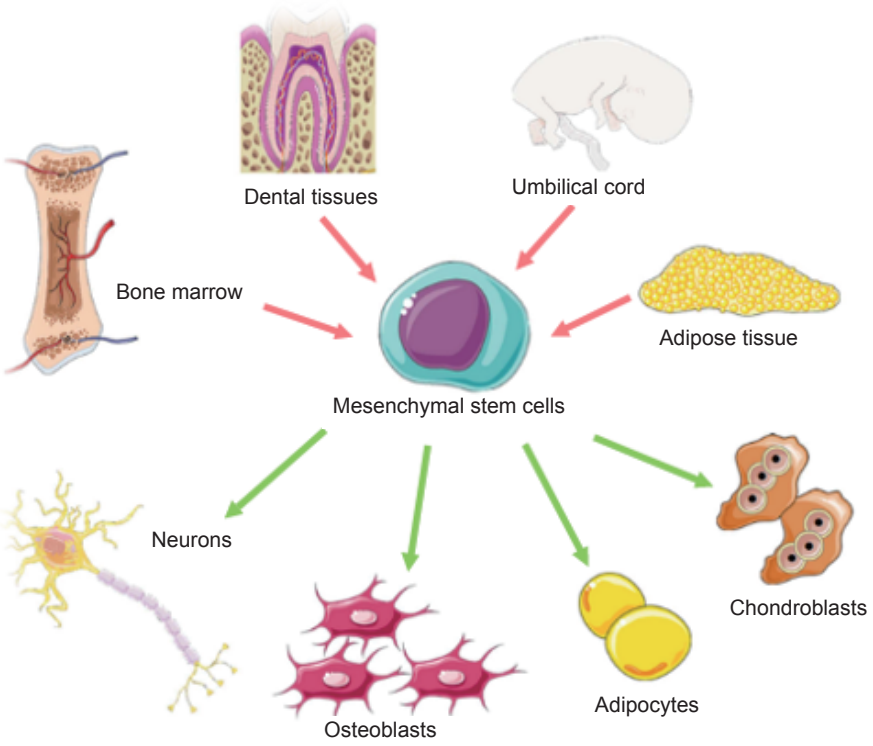
About US

Creative Bioarray is a leading provider of immortalized human cell lines and immortalized animal cell lines. **Our cells and services are designed to fit the increasing need for relevant in vitro cell model systems and novel production hosts.**

Creative Bioarray has focused on the establishment of continuously growing cell lines by reactivation of telomerase and thereby provides cells with highest similarities to primary cells in function and behavior. And we have many years of experience in cell immortalization, and we have been able to successful immortalize cells from **human, monkey, mouse, bovine, chicken and canine** by using different immortalizing agents or genes.

Immortalized Stem Cell Lines

- Telomerized cell lines retain the cell-type specific phenotype while constantly growing
- No more lot-to-lot variability
- No more growth arrest
- Multipotent differentiation capacity

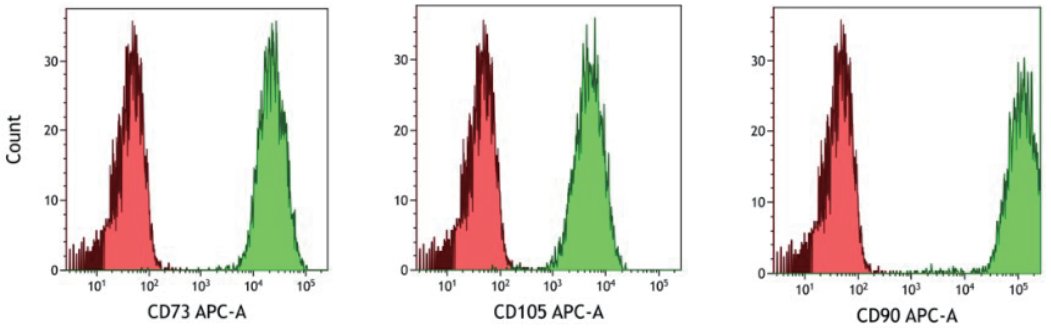


Immortalized Human Bone Marrow-derived Mesenchymal Stromal Cells (hTERT, No viral gene) (Cat No.: CSC-I2107Z)

Mesenchymal stem cells play essential roles in tissue homeostasis and repair, whereby evidence has accumulated that these effects are at least in part mediated by secreted extracellular vesicles (EVs). To boost the development of EV-based therapeutics continuously growing, standardizable production hosts for EVs are of ever increasing importance. Creative Bioarray offers telomerized cell systems that fulfil all requirements for production of EVs.

Features

- Original tissue: **Human Bone Marrow**
- Non-viral expression of **hTERT in mesenchymal stem cells**
- Establishment and growth under xeno-free conditions, complete documentation of any manipulation step
- **Quality control tested** (free of human pathogenic viruses, bacterial, fungal contaminations)
- Expression of cell-type specific markers such as **CD73, CD90, CD105**
- Differentiation potential towards **adipocytes, chondrocytes, osteoblasts**
- Secretion of stable **EVs with neo-angiogenic and anti-inflammatory activity**



Cell-type specific characteristics

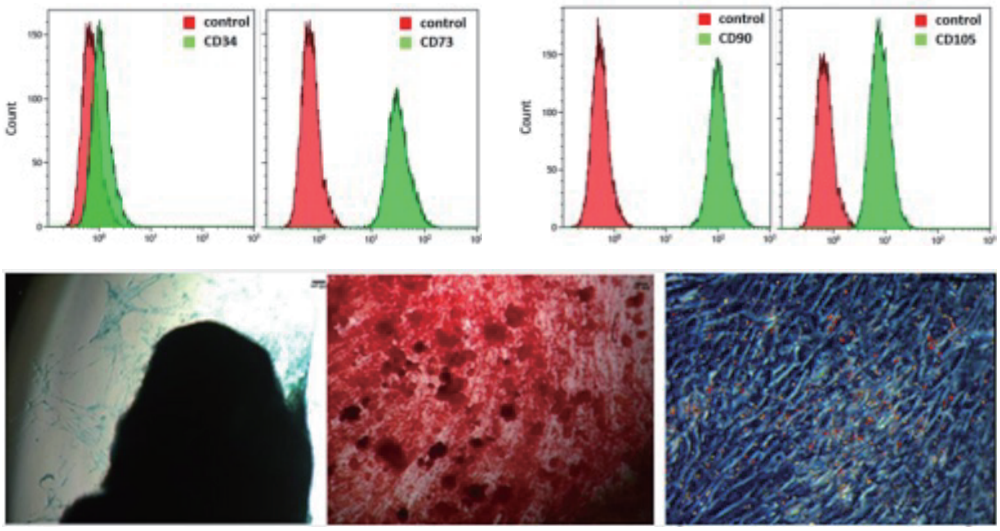
Continuous growth in **Immortalized Human Bone Marrow-derived Mesenchymal Stromal Cells(hTERT, No viral gene) (Cat No.: CSC-I2107Z)** are characterized by typical markers and functions of mesenchymal stem cells and can be grown continuously for more than 50 population doublings without showing signs of growth retardation or replicative senescence.

Immortalized Human Adipose-derived Mesenchymal Stromal Cells (hTERT, No viral gene) (Cat No.: CSC-I2228Z)

Features

- Original tissue: **human adipose tissue**
- Life span extension of isolated MSCs by introduction of **hTERT**
- Expression of cell-type specific markers **CD73, CD90, CD105**
- Growth under **serum-free cell culture conditions** possible, towards standardized culture conditions
- Differentiation potential towards **adipocytes, chondrocytes, osteoblasts**

Secretion of stable **EVs with neo-angiogenic and anti-inflammatory activity**



Cell-type specific characteristics

Immortalized Human Adipose-derived Mesenchymal Stromal Cells (hTERT, No viral gene) (Cat No.: CSC-I2228Z) homogenously express typical mesenchymal stem cell markers such as CD73, CD90 and CD105, whereas less than 5% of the cells express the hematopoietic stem cell marker CD34. Additionally, the cells can differentiated towards adipocytes, osteoblasts (lower, middle, Alizarin Red S staining) and chondrocytes (lower, right, alcian blue staining).

Extracellular Vesicles from Immortalized Human Stem Cells

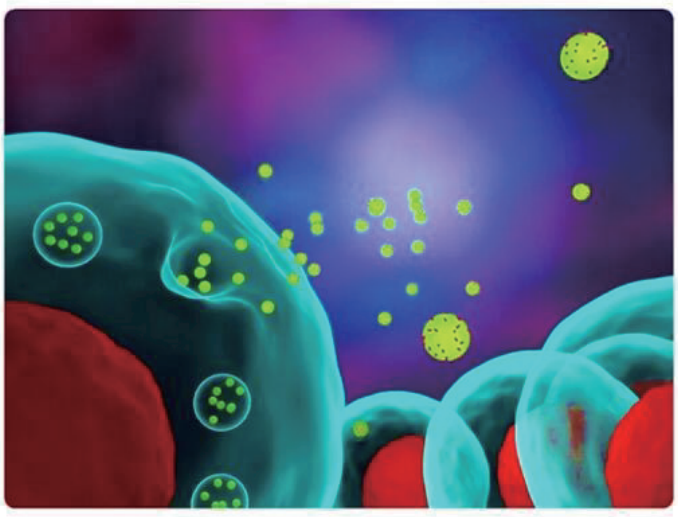
Extracellular vesicles derived from mesenchymal stem cells play a critical role in developing of immune regulation and regeneration. These EVs mimic the effects of stem cells and perform powerful functions by modulating immune pathways, promoting effector cell migration and proliferation, and reducing apoptosis. So EVs hold the potential to become a new and effective treatment due to their unique advantages over cell-based therapeutics, including non-replicating as do viruses, low immunogenicity, and relative ease of storage and shipping.

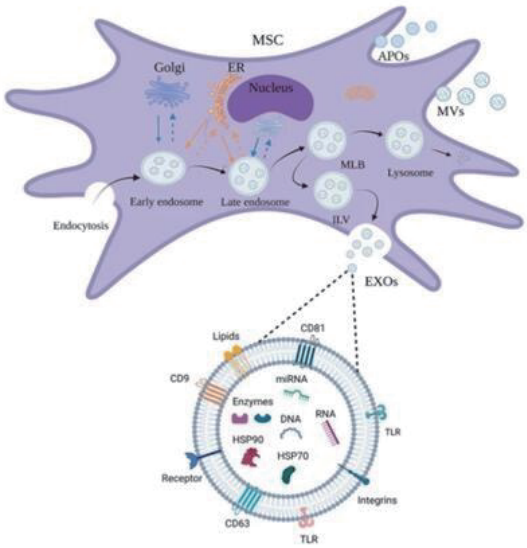
Creative Bioarray provides EVs from Immortalized Human Adipose-derived Mesenchymal Stem Cells-hTERT.

Cat No.	Product Name
CSC-I2228Z-EV	Extracellular Vesicles from Immortalized Human Adipose-derived Mesenchymal Stromal Cells

Cell-type specific characteristics

- **Creative Bioarray** has focused on the establishment of human cell lines that allow **standardizable production of high quality extracellular vesicles.**
- **From primary cells - to immortalized cells-hTERT - to production of EVs - to purification, characterization of Evs.**





Other Immortalized Human Stem Cells

Cat No.	Product Name
CSC-I2108Z	Immortalized Human Placental Tissue-Derived Mesenchymal Stem Cells-hTERT
CSC-I2109Z	Immortalized Human Reflected Amniotic Membrane-Derived Mesenchymal Stem Cells-hTERT
CSC-I2051Z	Immortalized Human Placental Amniotic Membrane-Derived Mesenchymal Stem Cells-hTERT
CSC-I2037Z	Immortalized Human Bone Marrow-Derived Mesenchymal Stem Cells-SV40T
CSC-I2038Z	Immortalized Human Bone Marrow-Derived Mesenchymal Stem Cells-SV40T +hTERT
CSC-I2040Z	Immortalized Human Adipose-Derived Mesenchymal Stem Cells-SV40T
CSC-I2041Z	Immortalized Human Umbilical Cord-Derived Mesenchymal Stem Cells-SV40T
CSC-I2042Z	Immortalized Human Umbilical Cord-Derived Mesenchymal Stem Cells-SV40T +hTERT
CSC-I2032Z	Immortalized Human Adipose-derived Mesenchymal Stem Cells-hTERTvv
CSC-I1907Z	Immortalized Human Bone Marrow-Derived Mesenchymal Stem Cells-SV40 (Tet-on)
CSC-I1908Z	Immortalized Human Adipose Tissue-Derived Mesenchymal Stem Cells-SV40 (Tet-on)
CSC-I1909Z	Immortalized Human Umbilical Cord-Derived Mesenchymal Stem Cells-SV40 (Tet-on)

Cell-type specific characteristics

- Study of differentiation processes and inflammation
- Co-culture with telomerized endothelial cells as enhanced in vitro model for studying vascular biology
- Development of novel treatment strategies/cell-based therapies and extracellular vesicles

Creative Bioarray

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