

FRS™ Pioneer

Broad Spectrum Chemically Defined FBS Replacement

Application Notes: Cryoprotection

Media City Scientific's Foetal Bovine Serum Replacement Solution (FRS™) Pioneer is a drop-in chemically defined and animal component free FBS replacement. FRS™ Pioneer supports the growth of a broad range of cell lines but can also be substituted for FBS for cell cryopreservation. Mix 10% DMSO with 90% FRS™ Pioneer for broad-spectrum cryopreservation efficacy in the liquid or vapor phase of nitrogen.

FRS™ is a drop-in, chemically defined FBS replacement that is:

- Priced on par with premium FBS
- Consistent - enabling scientific reproducibility and reliability.
- Contains no animal derived components.
- Grows a broad range of cells at a similar level of performance, including proliferation and longevity, to FBS.
- Free of contaminants.



Broad Spectrum - Performance
Across Multiple Cell Types



Chemically Defined—
Unparalleled Reproducibility



Contaminant Free



Cost Effective

Media City
SCIENTIFIC

Learn more @ mediacityscientific.com

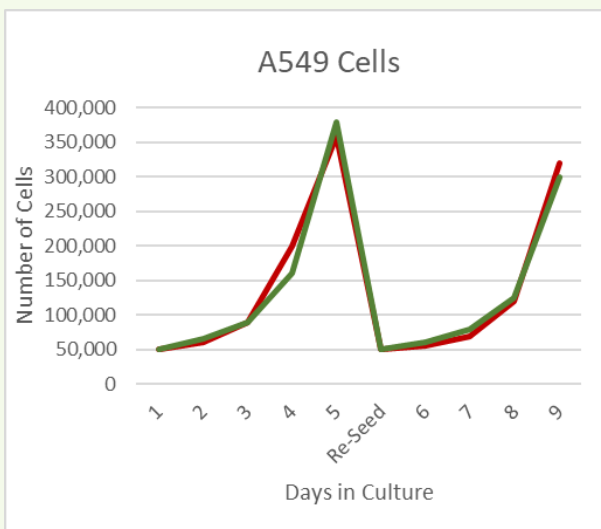
FRS™ Pioneer Performance

FRS™ Pioneer versus FBS for cell cryopreservation

Cells were frozen using standard methods in freeze media containing 10% DMSO with either 90% FBS or 90% FRS™ Pioneer. Cells were stored in a liquid or vapor phase nitrogen tank for a period of 1 week to 6 months. Cells were thawed using standard methods. Viability, proliferation, and function were analysed. Data indicate that, similar to FBS, FRS™ Pioneer is an effective cryopreservation agent when mixed with 10% DMSO. Data sets were collected internally and externally.

Immortalised Cell lines

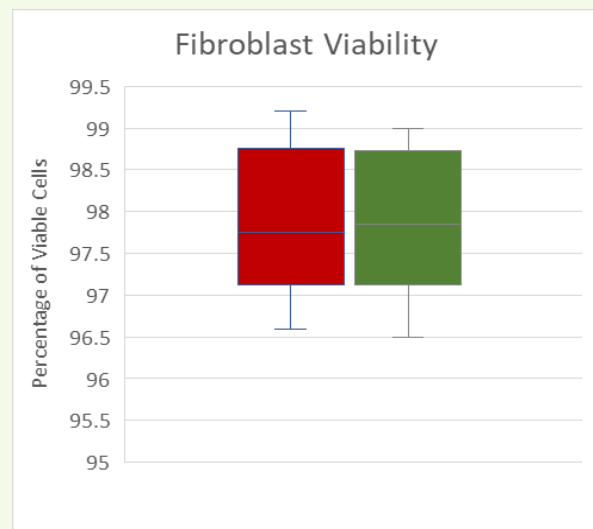
Tested: A549, CHO, MCF7



Growth of A549 cells following cryopreservation in FBS (red) or FRS™ Pioneer (green) -containing freeze media. (3 months, LN2)

Primary Cells

Tested: Muscle stem cells, chondrocytes, fibroblasts.



Viability of primary fibroblasts following cryopreservation in FBS (red) or FRS™ Pioneer (green) -containing freeze media (6 months, LN2)

External Case Study: PBMCs cryopreserved in vapor-phase N2 for 5-14 days using FRS™ Pioneer-containing freeze media retain viability and effector functions following thaw. Long-term biobanking study is in progress. Reach out for more details.