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FRS™ Pioneer - Fetal bovine serum replacement



Type: Media City Scientific

Available for purchase: Size: 100 ml, 500 ml, 1000 ml

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Product Information

The first member of our FRS family, FRS™ Pioneer is a chemically defined, animal origin free alternative to fetal bovine serum (FBS) for broad-spectrum cell culture.

FRS™ Pioneer can be added to cell culture media in place of FBS to culture or cryopreserve cells without the use of any animal components or serum (i.e. 100 ml of FRS™ Pioneer is equivalent to 100 ml of FBS). This allows for reproducible cell culture and provides a cleaner background. For primary cells, retain 1% FBS or supplement with additional growth factors to achieve full serum replacement (app notes below).

To date, analyses indicate that intracellular signaling and cellular function are maintained between FBS and FRS™ Pioneer-cultured cells.

Alternative protein names

serum replacement, animal-free serum

Product Size Wording

Order fulfilled by Qkine

Species reactivity

- human
- used in a wide range of species: crocodile, chicken, sheep, cow, water buffalo, mouse

Product Information

- Broad spectrum
- Animal origin free (AOF)
- Human specific product
- Cost effective
- Product is stable at room temperature and shipped as a liquid, upon receipt store at -20˚C to -80˚C, protect from light.

Reconstitution instructions

- Liquid

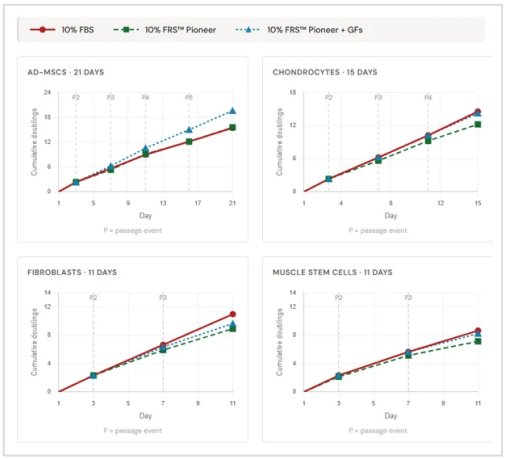
Featured applications

- Primary cell culture
- Culture of immortalized cell lines
- Cryopreservation
- Cell growth in microcarrier systems and on scaffolds
- Exosome research and manufacturing
- Chemically defined media

Scientific Information

Bioactivity

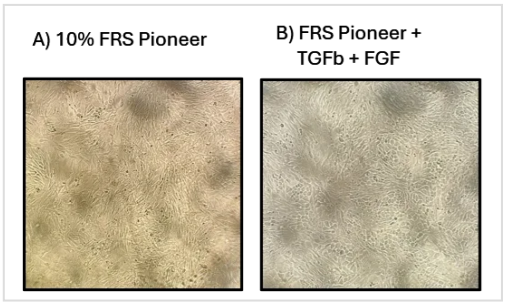
Cumulative population doublings over time across four primary cell types under fully defined serum-free conditions. GFs: AD-MSCs: 10 ng/ml PDGF-BB (Qk044) + 10 ng/ml FGF-2 (Qk025); Chondrocytes: 10 ng/ml FGF-2 + 1 ng/ml TGF-β1 (Qk010); Fibroblasts: 10 ng/ml FGF-2 + 10 ng/ml PDGF-BB; MuSCs: 2 ng/ml TGF-β1 + 50 ng/ml FGF-2. Note the muscle stem cells were grown with 20% supplementation (FBS or FRS Pioneer). Dashed vertical lines indicate passage events. Points indicate measured values; lines represent interpolated growth between passage events. Basal media alone failed to support proliferation of any cell type beyond 72 h.



Application note | FRS™ Pioneer: A broad-spectrum, chemically defined and animal-free serum replacement for primary cell culture

Purity

Representative morphology of primary chondrocytes under defined conditions. (A) FRS™ Pioneer without TGF-β1 showed morphological drift toward a fibroblastic phenotype. (B) FRS™ Pioneer + TGF-β1 PLUS™ (Qk010) + FGF-2 (Qk025) maintained chondrogenic morphology.



Application note | Animal-free, defined culture system preserving chondrogenic phenotype: FRS™ Pioneer and animal origin-free TGF-β1

Original product page: https://qkine.com/product/frs-pioneer-fetal-bovine-serum-replacement/

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