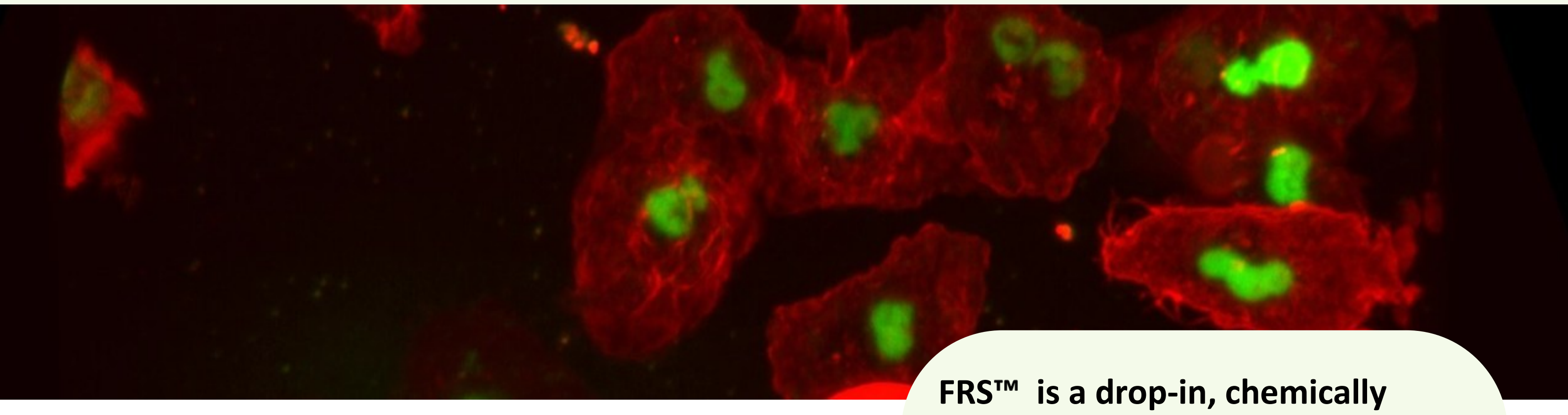
FRS™ Pioneer

Broad Spectrum Chemically Defined FBS Replacement

Frequently Asked Questions (FAQs)



Foetal Bovine Serum (FBS) has been a vital and historically irreplaceable serum supplement for cell culture media. Limitations including inherent contaminants and batch inconsistency alongside high and volatile prices are well known to scientists. This makes its use undesirable in research and clinical settings.

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 types.

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

FRS™ Pioneer FAQs

Considerations for switching to FBS-free culture

In what areas can FRS™ Pioneer effectively replace FBS?

FRS™ Pioneer has been used to grow a broad range of immortalised cell-lines, allowing for easy chemically-defined and reproducible cell culture. It supports the growth of nutritionally demanding primary cells in the short term, allowing for back-ground free assays or exosome analyses. It has been used for long-term culture of nutritionally demanding primary cells with 1-2% FBS, allowing your FBS batches to last 5-10x longer. It has been used with 10% DMSO as a cryopreservation agent for a range of cell types. To date, downstream analyses centring intracellular signalling or functional capabilities have not identified differences in cells cultured in FBS versus FRS™ Pioneer. See data sheets or ask directly for more details.

What is in FRS™ Pioneer?

FRS™ Pioneer contains key recombinant proteins, lipids, vitamins, amino acids, trace elements and other factors found in FBS. It contains no undefined plant or animal components, including BSA.

Is FRS™ Pioneer protein-free?

No, like FBS, FRS™ Pioneer contains proteins critical for cell growth. FRS™ Pioneer contains substantially less protein than FBS while maintaining the ability to support cell proliferation.

Is there anything found in FBS but not FRS™ Pioneer?

Yes. FBS contains a wide range of immune-associated proteins and molecules *(e.g. complement, immunoglobins, many cytokines).* These components are not present in FRS™ Pioneer which reduces the background signal you can expect to see in associated assays. FBS also contains adhesion factors not present in FRS Pioneer; this can be beneficial when adapting adherent cells to suspension culture. If culturing adhesion cells with FRS Pioneer, we recommend coating the tissue culture plates with adhesion proteins (see GECKO).

How should I passage adherent cells in FRS™ Pioneer?

Many adherent cells require an adhesion coating to encourage attachment of cells to standard tissue culture plastic. We recommend coating your cell culture surface with adhesion proteins. Suitable options include the animal-free GECKO coating by Media City Scientific, or a cell-specific coating *(e.g. vitronectin, fibronectin, laminin, collagen, gelatine, Matrigel).* Please reach out or check our website for recommendations specific to your cell type. When passaging cells, we recommend Accutase or Tryple over Trypsin and minimising exposure of cells to passaging reagents. Including conditioned media can also improve adherence.

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Does FRS™ Pioneer contain exosomes?

No. Unlike FBS, exosomes are not present in FRS™ Pioneer. This provides a clean background for exosome production and isolation systems. More information on the use of FRS™ Pioneer in the context of exosome research will be released imminently.

Is FRS™ Pioneer cGMP-compliant for use in therapeutics?

FRS™ Pioneer is presently manufactured under ISO9001 and ISO13485 conditions for research use only. We are presently planning for manufacture of a cGMP-grade FRS™ Pioneer. Please contact us if this is of interest.

More questions?

We're scientists too, and we want to help. Reach out and we'll happily share additional information you might need to make sure your experiments are successful.