

**Document:** ProdSpec PLSR01

**Created on:** 19/01/2023

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**Revision number:** 001

**Created by:** Reka Tron

**Last approved by:** Julian Arjuna Bisten

**Department:** Production

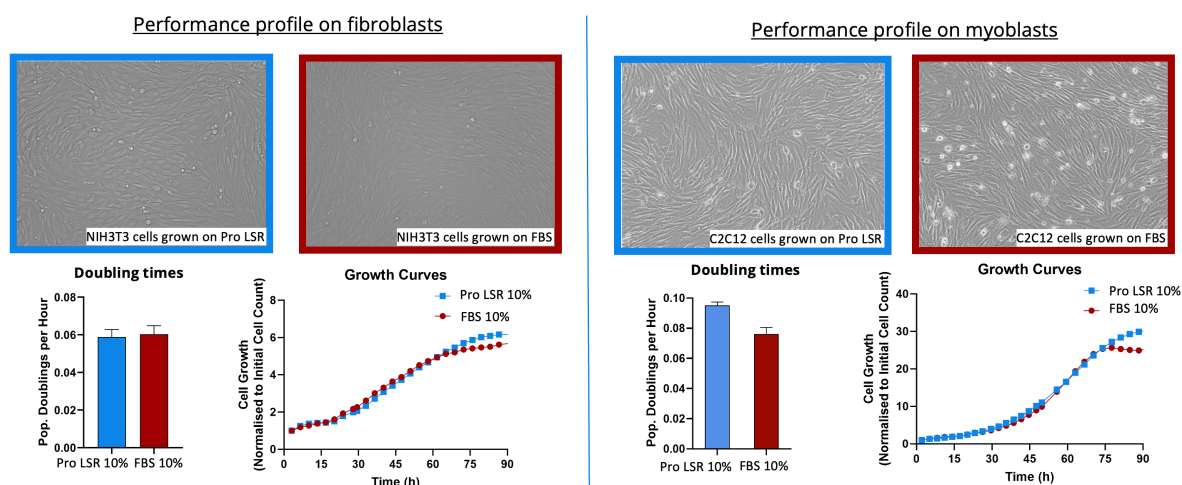
## Product specification sheet

# Proliferum<sup>®</sup> LSR

A critical challenge in the cell culture industry is the cost of growth media. FBS is often used in cell culture but is unethically sourced and has large price and performance fluctuations. Serum-free formulations are typically expensive, do not perform well across the different cell lines, and are not designed for scale.

Multus creates ethical high-performing cell culture media and ingredients to accelerate R&D across the life science industry. Proliferum<sup>®</sup> LSR is designed to grow different mammalian species' myoblasts, fibroblasts and adipocytes with the key benefits of being serum-free, adaptation-free and demonstrating high performance and versatility across cell types and scaffolding materials over multiple passages.

### Functional Profile



**Figure 1:** Comparison performance between FBS and Proliferum<sup>®</sup> LSR (10X) in DMEM/F12.



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## Quality Controls

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Test	Specification
pH	6 - 7.2
Osmolarity (mOsm/kg)	280 - 320
Bacteria Testing	Negative
Mycoplasma Testing	Negative
Fungal Testing	Negative
Particulate Examination	Negative
Endotoxin	< 10 EU/mL
Filtered	0.2 µm
Cell growth	Pass
Physical form	Liquid
Colour	Faint beige

## Storage and Handling

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Upon receipt, store Solution 1 at 2-8°C and the incomplete Proliferum® LSR below -15°C.

*This item is intended for research purposes only and should not be used for production, diagnostics, therapeutics, or consumption purposes.*



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## Instructions for Use

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No adaptation required when switching from serum to Proliferum<sup>®</sup> LSR.

**Complete with Solution 1** – To use this product, defrost frozen incomplete Proliferum<sup>®</sup> LSR overnight at 2-8°C. It can be aliquoted into smaller volumes to avoid repeated freeze-thawing.

How much Solution 1 do I need if I normally use 10% FBS?		
Proliferum LSR	10 mL	100 mL
Solution 1	1 µL (0.001mL)	10 µL (0.01mL)
DMEM/F12	90 mL	900 mL
TOTAL	100 mL	1000 mL

Combine the incomplete Proliferum<sup>®</sup> LSR with Solution 1 as indicated on the label. Once combined, store at 2-8°C and use within 21 days.

**Concentration** – For cell culturing, dissolve Proliferum<sup>®</sup> LSR to a final concentration of 10%\* in basal media (DMEM/F12 recommended). Prior to culturing, allow Proliferum<sup>®</sup> LSR to equilibrate to room temperature. Do **not** warm media at 37°C prior to use.

*\*Note: If you normally use higher percentage of serum, make sure to add the same % of Proliferum<sup>®</sup> LSR, e.g. if you regularly culture your cells at 20% FBS, use 20% Proliferum<sup>®</sup> LSR as well.*

How much Proliferum LSR should I use?		
	<i>I normally use 10% FBS</i>	<i>I normally use 20% FBS</i>
<b>Proliferum LSR 10X</b>	10% ProLSR; 90% DMEM/F12	20% ProLSR; 80% DMEM/F12

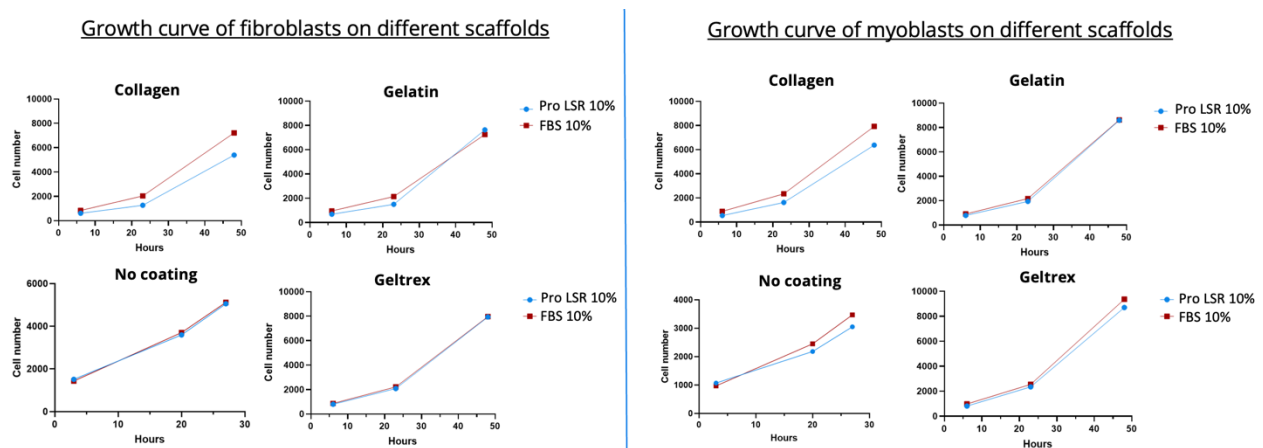
When passaging the cells, make sure to **deactivate the trypsin** with trypsin inhibitor. Normally serum inhibits trypsin, but with a serum-free media, you will need to add a Defined Trypsin Inhibitor (DTI) to inhibit further trypsin reaction (for example, Fisher #10703864).

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**Osmolarity** of the product may change when combined with basal media. If working with cell lines that are sensitive to osmotic shock, please adjust complete media with 5M NaCl or other concentrated salt solution as necessary.

**Scaffolds** – Proliferum<sup>®</sup> LSR works well with different scaffolds, but it is still recommended to use a scaffold to support the cell attachment. Examples of tested scaffolds are shown in Figure 2.



**Figure 2:** Comparison of growth on different scaffolds between 10% FBS and 10% Proliferum<sup>®</sup> LSR 10X in DMEM/F12.