A microscopic view of cells in culture, showing two large, bright, glowing cells in the foreground, with a dense layer of smaller cells in the background. The image is set against a dark blue background with a white curved shape at the bottom.

Supercharge  
your cell culture  
medium...

**City-Mix™**

Reduce costs by **70%**

# What is City-Mix™

City-Mix™ represents a transformative advancement in cell culture technology. This patented, non-toxic formulation offers a range of exclusive serum alternative supplements that facilitate cell proliferation and extracellular matrix production, all while being animal-free.

The ethical and sustainable profile of City-Mix™, coupled with its ability to reduce batch-to-batch variability, provides substantial cost savings and enhances the efficiency and effectiveness of cell culture media in laboratory settings. Supplied as a 25x liquid concentrate, City-Mix™ allows for fast preparation and easy dilution into any media, making it a conscientious choice for a wide array of biotech applications.

## Applications

City-Mix™ finds applications across various sectors, including:

**Biomedical Research:** Enhances the growth of cell cultures used in medical and pharmaceutical research, ensuring precise and consistent cell behaviour, providing a scalable and efficient culture medium.

**Regenerative Medicine:** Facilitates advancements in regenerating damaged tissues and organs, thanks to its efficiency and compatibility with human cells.

**Cellular Agriculture:** Offers a sustainable and ethical medium for cultivating meat products, meeting the growing demand for lab-grown food options.

**Academic Research:** Enables cutting-edge research in cell biology, genetics, and related fields with improved outcomes and efficiency.

**Bioproduction:** Assists in the manufacturing of biological products such as vaccines, enzymes, and therapeutic proteins by streamlining cell culture processes.



# Benefits

## Cost Reduction

Reduce media costs by 70%

## Food Safe

Chemically defined and xeno-free for safe cell cultures

## Batch Consistency

Reduces batch variability for dependable results

## Ethical Science

Animal-free, supporting ethical research practices

## Seamless Integration

Easily adapts to existing protocols, enhancing performance

## Cell Type Compatibility

Suitable for a broad range of cell types

## Recombinant Cytokine Reduction

Decreases cytokine use by 50-75%

## Recombinant Albumin Reduction

Cuts albumin use by 75%

## Increased Tissue Volume

Boosts tissue volume for better yield

## Zero Bioaccumulation

Maintains biomass integrity

## Chemically Defined

Provides precise control for cell cultures

# Features

## Patented Formulation

Unique blend of inert, safe, and eco-friendly macromolecules

## Macromolecular Crowding

Replicates in vivo environments to enhance cell cultures

## Enhanced Cell Behaviour

Boosts cell proliferation and matrix production, minimising additional supplement needs

## Animal-Free

Ethically developed without animal derivatives

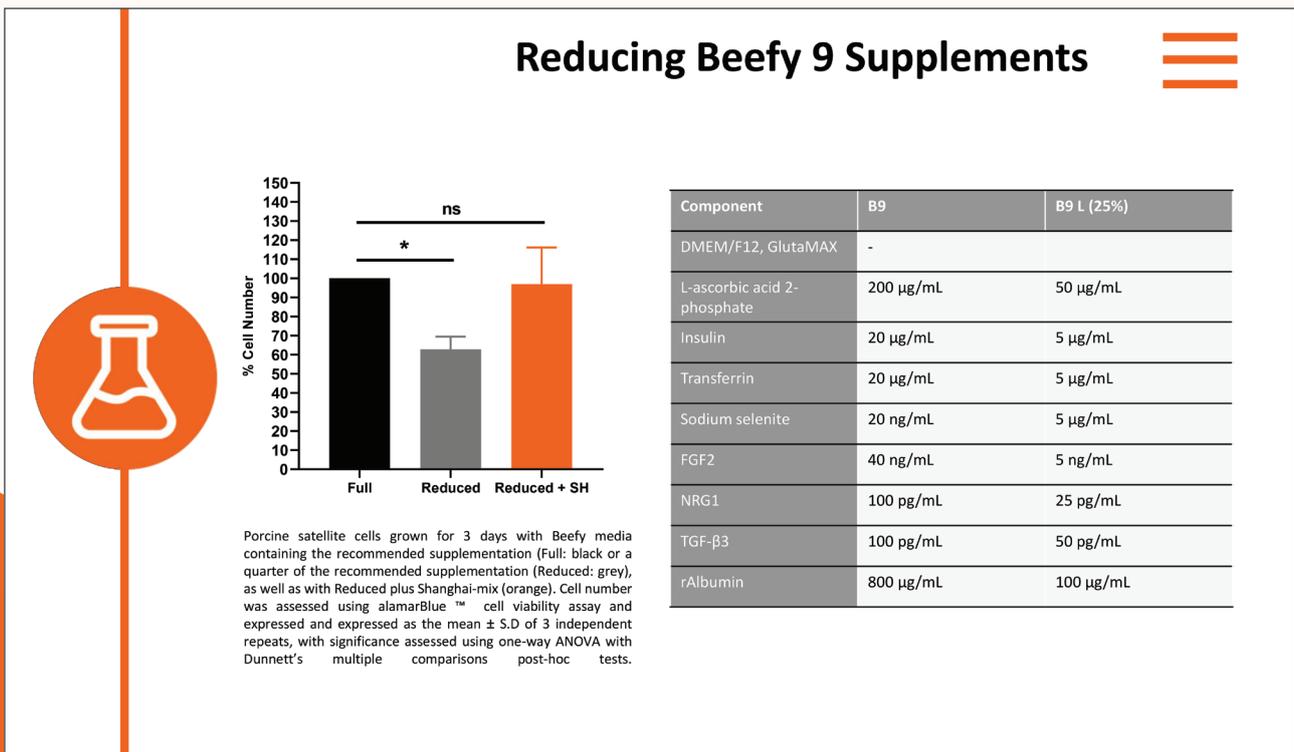
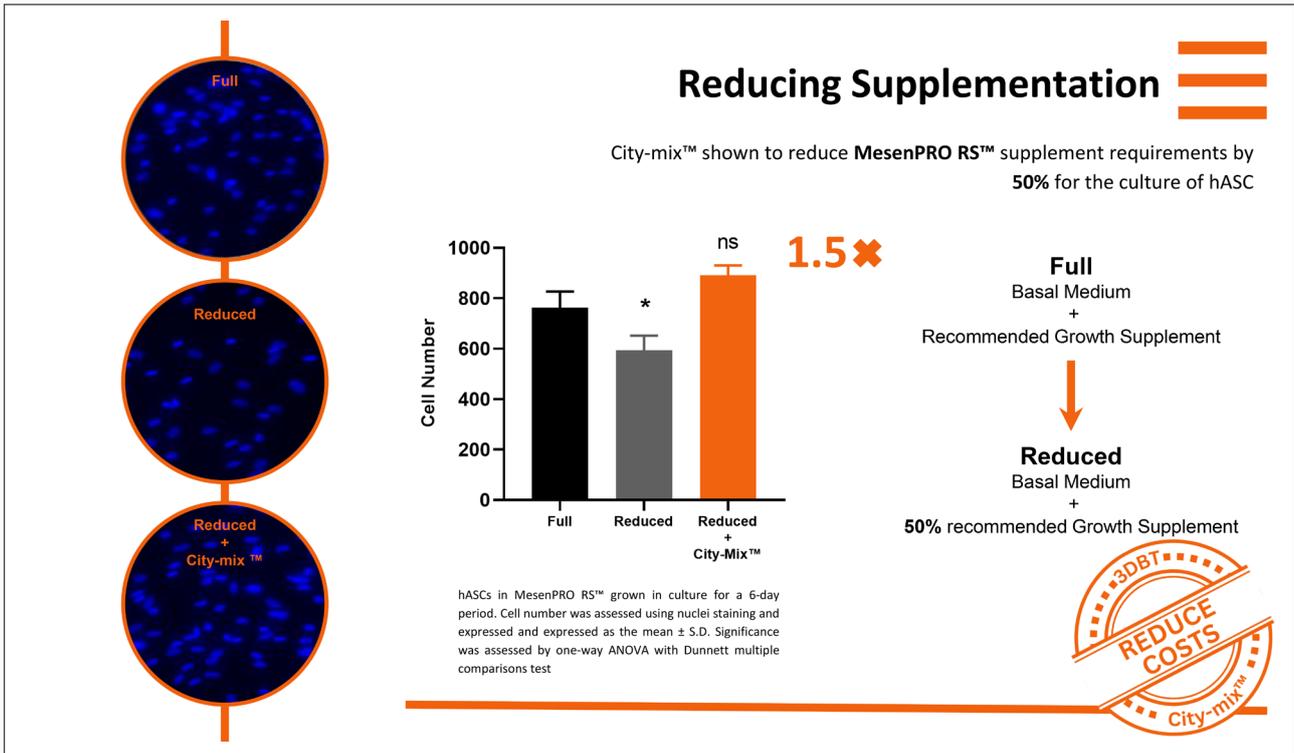
## Easy Integration

Complements existing protocols, elevating performance efficiently

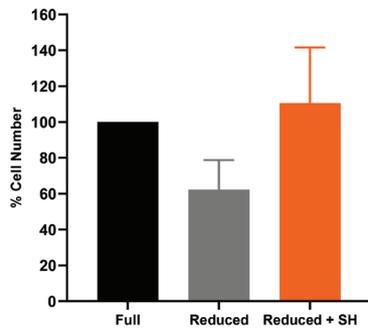


# Performance

The following underscores City-Mix's role in elevating cell culture media efficiency, highlighting both cost-effectiveness and ethical advancements in biotechnological applications.



## Reducing Essential 8™ Supplementation



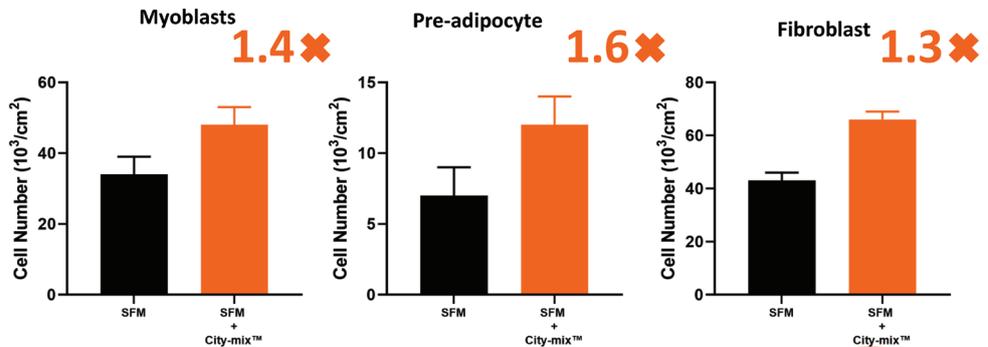
Porcine satellite cells grown for 7 days with Essential 8™ media containing the recommended supplementation (Full: black or a quarter of the recommended supplementation (Reduced: grey), as well as with Reduced plus Shanghai-mix (orange). Cell number was assessed using alamarBlue™ cell viability assay and expressed as the mean ± S.D. of 2 independent repeats

Component	E8	E8 L (25%)
DMEM/F12, GlutaMAX	-	-
L-ascorbic acid 2-phosphate	64 µg/mL	16 µg/mL
NaHCO <sub>3</sub>	543 µg/mL	135.75 µg/mL
Insulin	19.4 µg/mL	4.85 µg/mL
Transferrin	10.7 µg/mL	2.675 µg/mL
Sodium selenite	14 ng/mL	3.5 ng/mL
FGF2	100 ng/mL	25 ng/mL
TGF-β1	2 ng/mL	0.5 ng/mL

## Reducing Media Components

City-mix™ shown to increase proliferation of **Immortalised** and **primary** porcine cells in **reduced supplemented** serum free media

Kolkmann Media  
DMEM/F12 GlutaMAX  
ITS-X (1%)  
Ascorbic acid (1mM)  
Human albumin (2.5 g/L)  
IGF-1 (50 µg/L)  
FGF2-G3 (5 µg/L)  
HGF NK1 (2.5 µg/L)



Immortalised porcine myoblasts, primary porcine pre-adipocyte and primary porcine fibroblasts grown in culture for a 7-day period. Cell number was assessed using nuclei staining and expressed as the mean ± S.D.

50% reduction in GF's

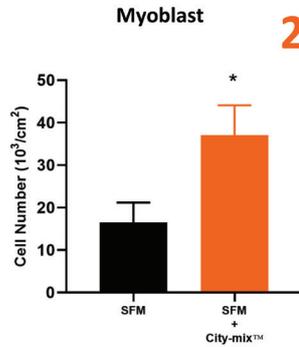
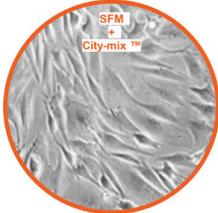
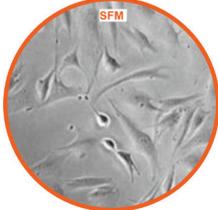


City-Mix™ unlocks your cell culture potential

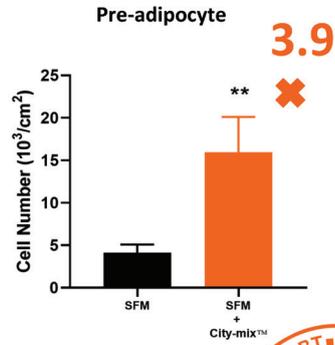
# Building Media Formulations

City-mix™ shown to **increase** immortalised murine **proliferation** in simple serum free media formulations

DMEM/F12  
GlutaMAX (2%)  
ITS-X (1%)  
Ascorbic acid (1mM)



Immortalised murine myoblasts grown in culture for a 3-day period. Cell number was assessed using alamarBlue™ cell viability assay and expressed as the mean ± S.D. Significance was assessed by an unpaired T-Test



Immortalised murine pre-adipocytes grown in culture for a 7-day period. Cell number was assessed using alamarBlue™ cell viability assay and expressed as the mean ± S.D. Significance was assessed by an unpaired T-Test

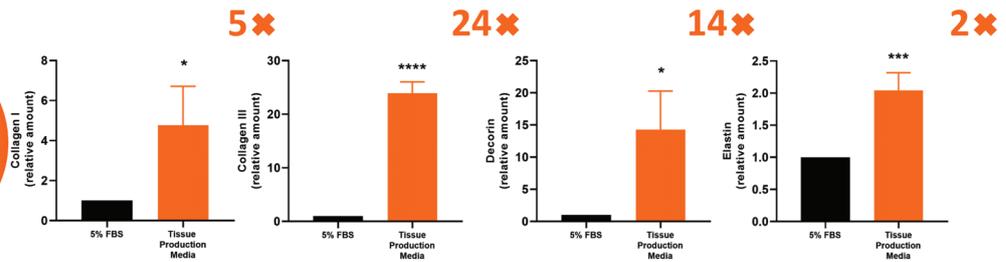


**3DBT™**

## Boosting ECM Production

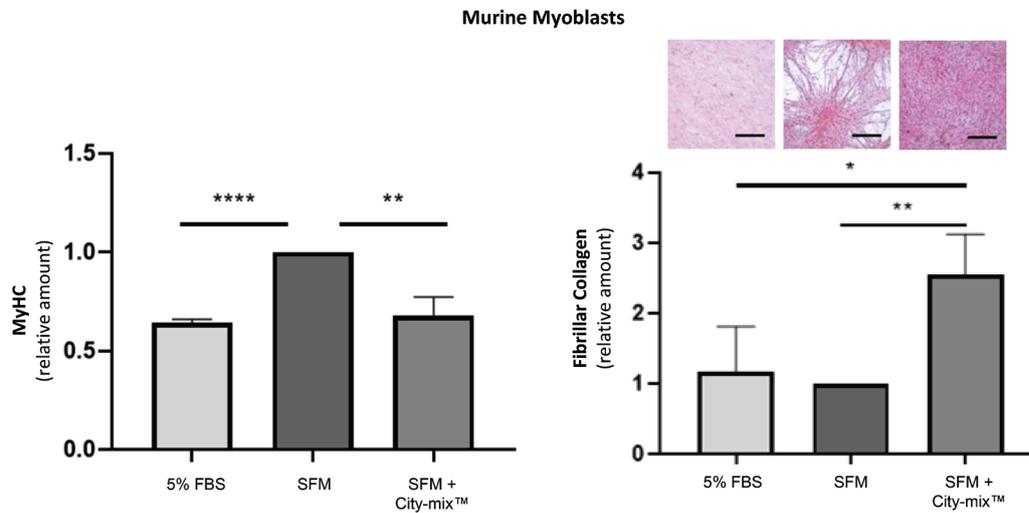
City-mix™ shown to facilitate **human dermal fibroblast** tissue production via **extracellular matrix** establishment

DMEM/F12  
GlutaMAX (2%)  
ITS-X (1%)  
Ascorbic acid (1mM)  
FBS (5%)  
City-mix™



Primary human dermal fibroblasts grown in culture for a 14-day period. Total collagen I, collagen III, elastin and decorin were assessed using quantitative immunofluorescence analysis utilising Odyssey Infrared imager (LiCor) and expressed as the mean ± S.D. Significance was assessed by an unpaired T-Test

City-Mix™ supercharges your regular cell culture media



## Additional Benefits to Cell Culture

- 10-fold increase in total collagen production
- 2-3-fold increase in other extracellular matrix (ECM) components
- Increased cell proliferation
- Maintenance of cell differentiation

Elevate your cell culture, fuel your discoveries, and experience the City-Mix™ difference

# Macromolecular Crowders

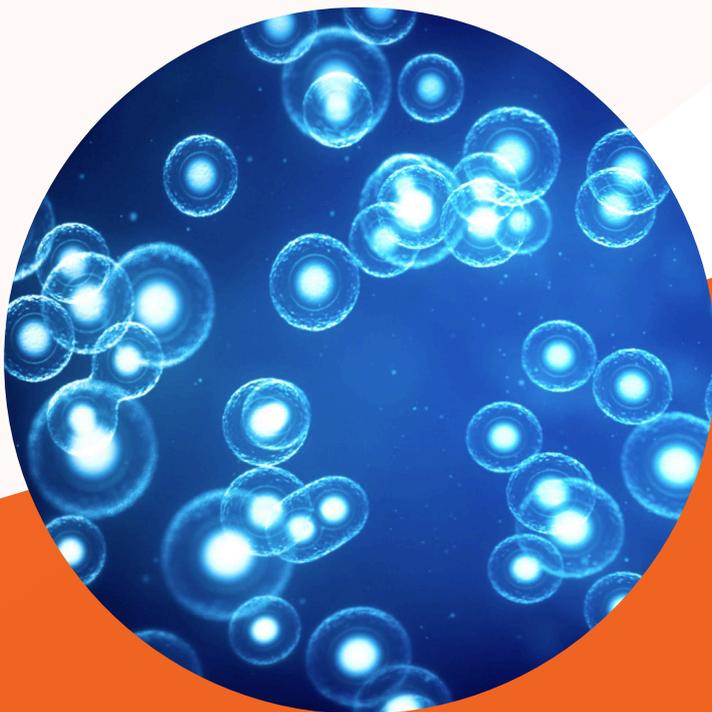
Macromolecular crowding enhances cell culture media efficiency by mimicking cells' dense environments. This key biotech concept leverages natural conditions, advancing research and production across the industry.

## For Business

Understanding the value of macromolecular crowders like City-Mix™ is pivotal for strategic decision-making. It represents a significant leap in biotechnology, offering a solution that not only enhances cell culture performance but also aligns with the goals of cost-effectiveness and ethical responsibility. Adopting City-Mix™ can position your company at the forefront of innovation, driving sustainable growth and competitive advantage in the biotech sector.

## For Scientists

Macromolecular crowders, exemplified by City-Mix™, optimise cell culture environments by mimicking the dense molecular conditions found in vivo. This innovative approach significantly improves cell proliferation rates, reduces the need for expensive growth factors, and ensures consistent, high-quality results. By integrating City-Mix™ into your laboratory practices, you can achieve more efficient, reproducible, and scalable outcomes, essential for advancing research and development projects.



City-Mix™  
boosts performance  
without disturbing  
your workflow

# Order your Starter Kit or Book a Consultation



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