

# BIOSOLUTIONS BY PAN™

**/ MEDIA / REAGENTS / SERUM / BUFFER**

## POWERSTEM MSC1 GMP grade

**Serum-free medium for human  
mesenchymal stem cells**



**PRODUCT NO.: CT-77355K  
SIZE: 500 ml KIT**

**PowerStem MSC1 GMP grade** is a fully defined, xeno-free and serum-free cell culture system specifically developed for the **clinical-scale expansion of human mesenchymal stem cells (hMSC)**. Designed in compliance with Good Manufacturing Practice (GMP EU Annex 1) requirements, this advanced medium supports robust proliferation while maintaining the functional integrity and multipotency of MSCs.

Building on the proven performance of the research-use-only (RUO) formulation, PowerStem MSC1 enables **reduced variability, and improved consistency**, while significantly minimizing the risk of contamination associated with serum-containing systems.



**PAN™  
BIOTECH**

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# POWERSTEM MSC 1

## GMP grade



### / KEY FEATURES:

**Serum-free medium for human mesenchymal stem cells (hMSC).**



**PRODUCT NO.:**  
CT-77355K

**SIZE:**  
500 ml KIT



### GMP EU ANNEX 1-COMPLIANT PRODUCTION

Manufactured under stringent GMP EU Annex 1 conditions, ensuring full traceability, documentation, and batch-to-batch consistency required for clinical and commercial manufacturing.

### XENO-FREE & SERUM-FREE FORMULATION

Eliminates animal-derived components, reducing immunogenicity risks and supporting regulatory acceptance for human therapeutic applications.

### OPTIMIZED FOR MSC EXPANSION

Promotes rapid proliferation while preserving MSC identity, including expression of key markers (CD90, CD105, CD73) and absence of hematopoietic markers (CD34, CD45).

### MAINTAINS MULTIPOTENCY

Supports long-term culture while preserving the ability of MSCs to differentiate into multiple lineages such as osteogenic, chondrogenic, and adipogenic cells.

### / ADVANTAGES FOR CLINICAL AND INDUSTRIAL APPLICATIONS:

#### ■ REGULATORY READINESS

The GMP-grade formulation facilitates seamless integration into **cell therapy manufacturing workflows**, supporting regulatory compliance.

#### ■ REPRODUCIBILITY & PROCESS STANDARDIZATION

Defined, serum-free composition ensures **consistent performance across batches**, a critical requirement for scalable manufacturing and quality control.

#### ■ ENHANCED SAFETY PROFILE

Absence of serum and xenogeneic components minimizes the risk of pathogen transmission and immunological complications.

#### ■ SCALABLE MANUFACTURING

Suitable for **large-scale bioprocessing**, enabling efficient expansion of MSCs for applications in regenerative medicine, immunotherapy, and tissue engineering.

#### ■ PROCESS COMPATIBILITY

Designed for use in controlled environments and compatible with **closed and automated systems**, supporting modern cell therapy production platforms.

### / APPLICATIONS:

- Clinical-grade expansion of human mesenchymal stem cells (hMSC)
- Cell and gene therapy manufacturing
- Regenerative medicine and tissue engineering
- Advanced therapy medicinal products (ATMPs)



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