



# DASEA® Regencarrier® biomimetic microcarrier

China: F20220000380

US FDA CDER DMF No.: 038392

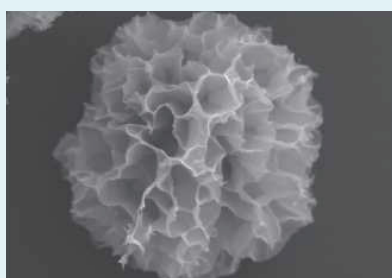
US FDA CBER DMF No.: 29520

US FDA CBER DMF No.: 31035

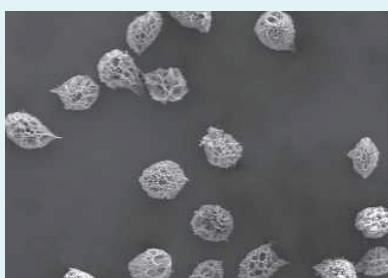
US FDA CDER DMF No.: 040619

## ● PRODUCTS INTRODUCTION

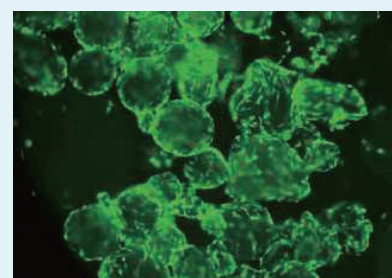
DASEA® Regencarrier® biomimetic microcarrier is a biomimetic porous microcarrier optimized for the 3D culture of stem cells. It has been precisely controlled from the biochemical components of the material, the two-dimensional surface topology, to the three-dimensional spatial conformation and pore structure, to provide a biomimetic in vitro microenvironment, which can strongly promote the stem cell adhesion, proliferation, and maintenance of stem cell phenotype. Its unique porous structure can also effectively reduce the damage to cells caused by shear force in the process of three-dimensional cell culture. The dosage form and dose of DASEA® Regencarrier® biomimetic microcarrier can be customized according to the user's needs. The porosity is >90%, and the particle size can be controlled between 150-300µm, which can realize large-scale three-dimensional culture and expansion of stem cells. It has also obtained the CDE qualification for pharmaceutical excipient, and is the first injectable microcarrier for cells.



DASEA® Regencarrier® biomimetic microcarrier is a biomimetic microcarrier specially designed for large-scale culture of adherent cells



The porous microsphere structure of DASEA® Regencarrier® biomimetic microcarrier is a biomimetic microcarrier specially designed for large-scale culture of adherent cells under the scanning electron microscope



Human umbilical cord mesenchymal stem cells (hUCMSCs) were cultured on DASEA® Regencarrier® biomimetic microcarrier is a biomimetic microcarrier specially designed for large-scale culture of adherent cells for 72 hours and live cells were stained (green fluorescence)

## ● FEATURES

Biomimetic biochemical components, designed for cell affinity

Material mimics natural ECM components

2D topological structure biomimicry, designed for cell adhesion

Surface topological properties facilitate cell adhesion

3D conformational biomimicry, designed for cell proliferation

Micro-interconnecting pores facilitate cell migration

Biological enzymatic hydrolysis, designed for gentle collection of cells

The lysis of microcarrier does not damage cells

## ● APPLICATION AREA

Large-scale expansion  
and production of  
stem cells

Large-scale  
preparation and  
production of exosomes

Organoid  
culture

Bioartificial  
liver

Vaccine  
production

Cultured  
meat

## ● PRODUCT PARAMETERS

PROPERTIES	PARAMETERS
Raw Material	Collagen-based biomacromolecules
Appearance	White to light yellow powder
Microscopic Morphology	3D biomimetic porous microspheres
Dispersion	No obvious agglomeration
D <sub>50</sub> Particle Size	150-300 μm
Porosity	>90%
Average Pore Size	20 ± 10% μm
Surface Area	>10000 cm <sup>2</sup> /g
Applicable	Adherent cells
Sterile	Aseptic packaging
Instructions	No pretreatment required, gentle degradation



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