

Tools for Stem Cell Research

GC scaffold



GC Corporation
R & D Dept
<http://www.gcbiolabs.com/>

'GC.' R & D Dept

Reserach use only

GCscaffold (Biodegradable polymer scaffold)

GC scaffold is a biodegradable material for the paradigm of stem cell and tissue engineering. It is a PLGA (poly DL-lactic acid glycolic acid (LA:GA=75:25, Mw=120,000)) based product with validated biocompatibility. Three different shapes are designed to match your specific needs.

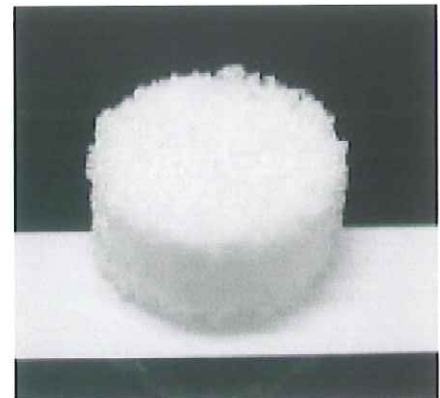
Block

Block HAP+

Size: ϕ 13 mm (for 24 well) , ϕ 5 mm (for 96 well)

〈Featurer〉

- Suitable for growth and differentiation of stem cell.
- Provide a suitable environment for 3D culture.
- Easy to isolate of total RNA from cells. (soluble in phenol.)
- Compatible with 24 well and 96 well microplate.



Powder

Powder HAP+

Particle size: 1000-700 μ m, 150-300 μ m

〈Feature〉

- Poromeric architecture is suitable for growth and differentiation of stem cell.
- Useful for application of float culture.
- Easy to isolate of total RNA from cells. (soluble in phenol.)
- Two types are available according to the purpose of use.

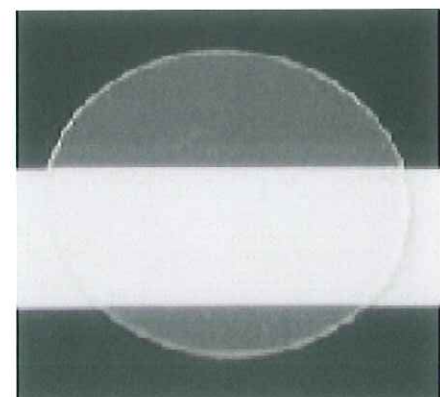


Plate

Size: ϕ 13 mm (for 24 well) , ϕ 5 mm (for 96 well)

〈Feature〉

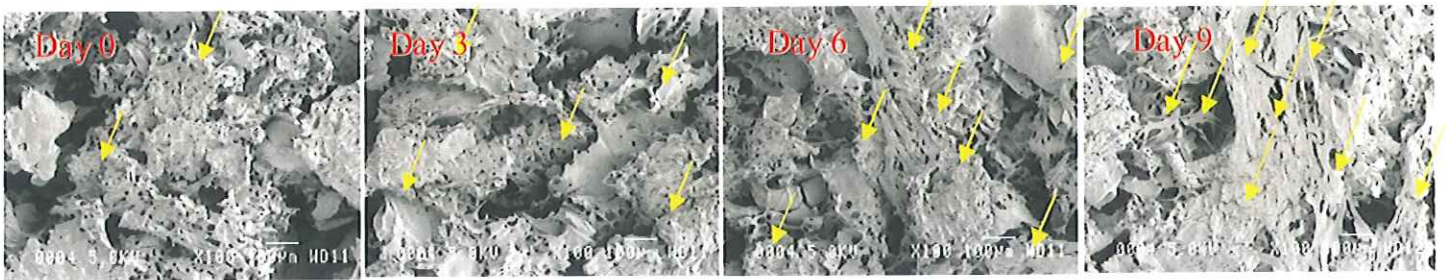
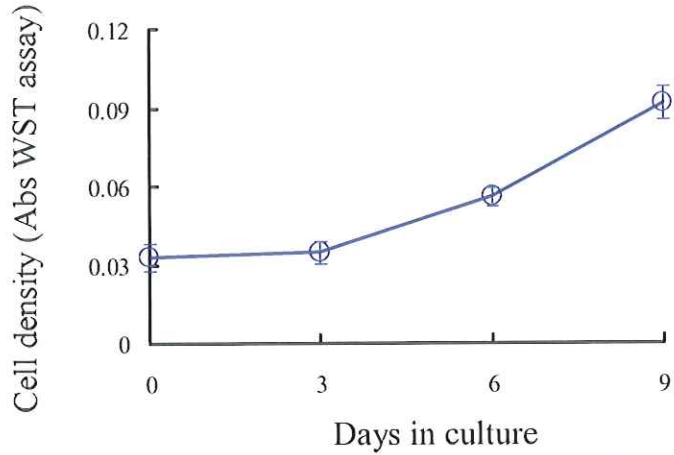
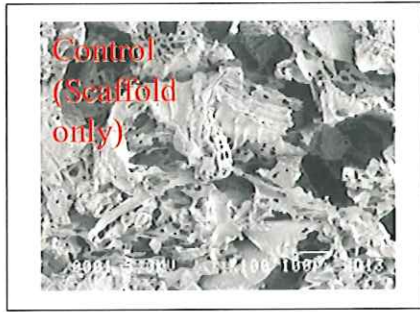
- Good wettability is suitable for growth and differentiation of stem cell.
- Transparent property make enable to observe with a optical microscope.
- Easy to isolate of total RNA from cells. (soluble in phenol.)
- Compatible with 24 well and 96 well microplate.



GC scaffold (Block)

Growth of human Mesenchymal Stem Cell on the GC scaffold (Block)

Cell: h-MSC
Medium: DMEM, 10 % FBS, P/S(+)



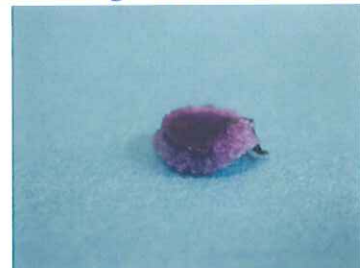
Differentiation of human Mesenchymal Stem Cell on the GC scaffold (Block)

Osteogenic differentiation



Alizarin red staining

Chondrogenic differentiation



Toluidine blue staining



Top surface

Cross section

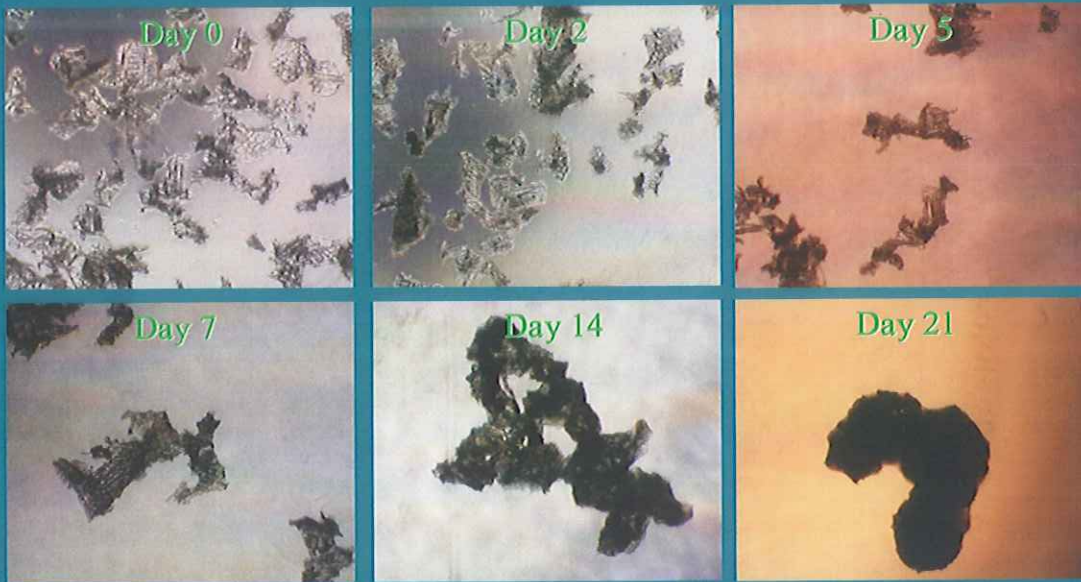


Top surface

Cross section

GC scaffold (Powder)

Growth of human Mesenchymal Stem Cell on GC scaffold (Powder) ($\times 100$)



GC scaffold (Plate)

Growth of human Mesenchymal Stem Cell on the GC scaffold (Plate)

$\times 100$

