

SERUM-FREE CELL CULTURING

c(RGDfK) Surface Chemistry Biochips

The use of fetal bovine serum (FBS) in cell culture is adopted by the cell biology community at large. There are variability, ethical, and experimental concerns in the production and use of FBS which has driven development of FBS-alternatives and serum-free approaches. By moving away from FBS, researchers gain increased definition of the *in vitro* environment and reduce experimental variance. Through the use of RGD motif-functionalized surfaces, cell viability is maintained in the absence of serum compared to traditional cultureware, streamlining processes such as transduction and purification, and

removing undefined components from cell media.

Application Note

- •Compatible with DMEM formulations not containing FBS
- Reduced variability
- Increased definition
- •Enhanced understanding of cellular activity
- •Simplified experimental workflows
- No serial passaging required



Serum-free cell culturing on Nanocrine c(RGDfK) Surface Chemistry Biochips

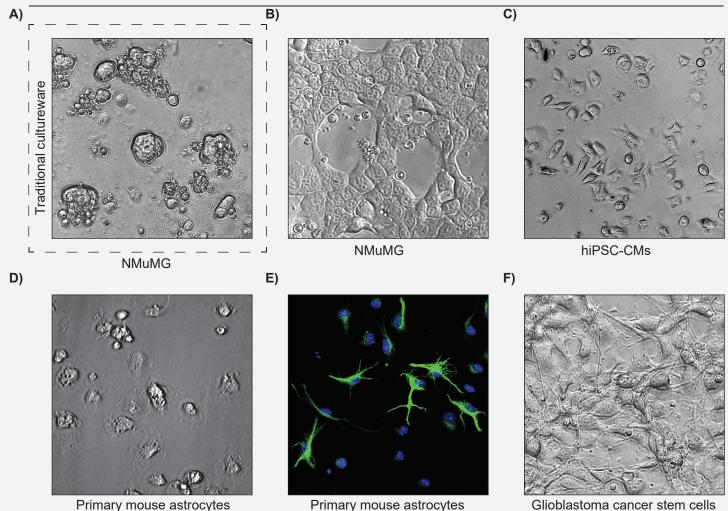


Figure 1) Cells cultured in serum-free conditions on c(RGDfK) Surface Chemistry Biochips. Cells were cultured for 1-7 days on "uncoated" cRGD-peptide monolayered biochips. **A)** NMuMG cells cultured on traditional cell treated cultureware. **B-F)** Several cell types (indicated below image) cultured on Nanocrine c(RGDfK) Surface Chemistry Biochips. (**E** - greep=GFAP, blue=DAPI).

Images courtesy of S. Lamouille (Fralin Biomedical Research Institute at Virginia Tech Carilion), J. W. Smyth (Fralin Biomedical Research Institute at Virginia Tech Carilion), and E. G. Thompson (Brain Science Institute at Johns Hopkins University)