

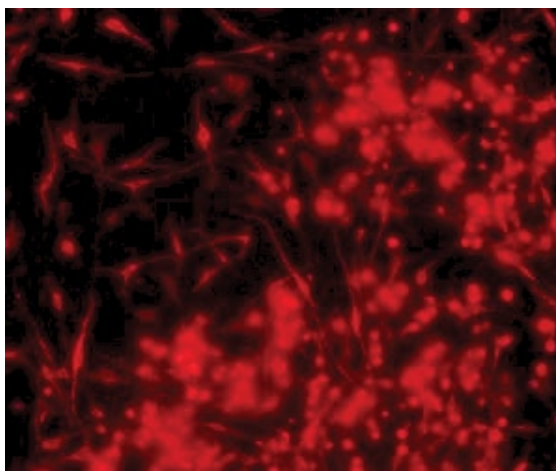
HyStem™-HP

For Slow Release of Growth Factors

HyStem-HP is ideal for stem cell applications where slowly released growth factors are crucial in recreating a stem cell niche. HyStem-HP has all the features of HyStem and includes thiol-modified heparin which stabilizes and immobilizes added growth factors. The growth factors are then slowly released over a period of weeks. HyStem-HP has demonstrated controlled release with growth factors such as basic fibroblast growth factor (bFGF), vascular endothelial growth factor (VEGF), transforming growth factor β 1 (TGF- β 1) and more.

HyStem-HP consists of a hyaluronan-based, synthetic extracellular matrix crosslinked with thiol-modified heparin (Gelin-S (thiol-modified denatured collagen) can be used as a positive control for cell attachment). The material is ready to use in three simple steps - reconstitute, mix, and go! HyStem-HP will gel at room temperature within 30 minutes with no low-temperature or low-pH steps in its preparation.

HyStem-HP is suitable for *in vivo* experimentation as well as *in vitro* stem cell culture.



Neural cells cultured on HyStem-HP (courtesy of L. Novikova, Umea University)

Advantages

Semi-Synthetic

Slow GF Release

Hyaluronan and heparin-based

User Controls Hydrogel Stiffness

Suitable for *in Vitro* and *in Vivo* Experimentation

Maintain Consistent Growth Factor Concentrations