

HyStem-HP

Product Number GS315-1EA

HyStem-HP is recommended for stem cell researchers whose applications require slow release of growth factors in a cell's microenvironment. HyStem-HP contains small amounts of thiolated heparin which ionically binds a wide variety of growth factors and slowly releases them over time.

HyStem-HP is ideal for stem cell applications where slowly released growth factors are crucial in recreating a stem cell niche. HyStem-HP hydrogels contains thiol-modified heparin which allows the slow release of growth factors (GFs) within an easily customizable, environment. HyStem-HP is a synthetic extracellular matrix (ECM) that can be injected and crosslinked in situ. Unlike an animal-derived extracellular matrix (ECM), HyStem-HP is chemically defined and nonimmunogenic. The HyStem-HP Hydrogel Kit contains HyStem-HP (a combination of thiol-modified hyaluronan, HA, and thiol-modified heparin), Gelin-S (thiol-modified gelatin), and Extralink (a thiol-reactive crosslinker, polyethylene glycol diacrylate, PEGDA).

The immobilized heparin in the hydrogel mimics the heparan sulfate proteoglycans normally present in the extracellular matrix (ECM). It also helps protect GFs from proteolysis and slows their release to attached cells. This reduces the amount of GF required to achieve stimulation of cell growth or differentiation when compared to the use of free GF in media. All GFs tested to date (bFGF, VEGF, Ang-1, PDGF, TGF β 1, KGF) are released at different rates, but over a period of several weeks.

Specifications

Product Number	GS315-1EA
Feature	Hydrogel Kit
Size	1 kit

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