Novel, Cost-Effective Method of Superfibronectin Formation

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Technology description

Researchers at Texas A&M have developed a novel method, both convenient and cost effective, to induce superfibronectin formation, using recombinant BBK32, a fibronectin-binding lipoprotein of Borrelia burgdorferi.

Background:

Superfibronectin is a polymer of the protein fibronectin that exhibits several unique properties, including enhanced cell adhesiveness and the ability to inhibit cell proliferation and angiogenesis. Superfibronectin is routinely used as a reagent to promote cell adherence for mammalian cell culture applications. In addition, the unique properties of superfibronectin make it an excellent candidate for the treatment of conditions involving cell proliferation, such as stent restenosis, diabetic retinopathy, and wound healing.

Description of Invention:

Researchers at Texas A&M have developed a novel method to induce superfibronectin formation. This method is enabled by using recombinant BBK32, a fibronectin-binding lipoprotein of Borrelia burgdorferi. The only other known inducer of superfibronectin formation is Anastellin, a fragment of the fibronectin protein. Recombinant BBK32 is conveniently expressed and purified from bacterial cultures, and compared with Anastellin, approximately 50% less BBK32 is needed to induce superfibronectin formation. Therefore this method offers a convenient, cost effective alternative for inducting superfibronectin formation.

Advantages

- Superfibronectin inducer BBK32 is quickly and conveniently purified from bacterial cells
- 50% less of the inducer is needed for superfibronectin formation, offering a cost-effective alternative

Institution

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