

A METHOD FOR GENERATION AND STORAGE OF A SECRETOME, A SECRETOME AND USES THEREOF

Highly potent and stable lyophilized secretome derived from immortalized hair follicle mesenchymal stem cells (iHF-MSCs), for applications in regenerative medicine and immunomodulatory therapies.

TYPE OF DEVELOPMENT

Lyophilized cellular secretome.

DESCRIPTION

Prime-LS is a highly potent therapeutic secretome obtained from immortalized mesenchymal stem cells derived from human hair follicles (iHF-MSCs). It is produced through an optimized process that includes isolation, pre-concentration, purification, and lyophilization without cryoprotectants, fully preserving its bioactivity. This technology enables continuous, scalable, and reproducible production of secretomes with high immunomodulatory and regenerative capacity, maintaining stability and purity in highly concentrated formats adaptable to diverse pharmaceutical formulations.

INDICATION

Therapeutic area: Regenerative medicine and immune-mediated diseases. Applications: Treatment of inflammatory and autoimmune diseases, tissue regeneration and drug delivery in advanced biologics.

NOVELTY/ADVANTAGE

Prime-LS overcomes key limitations of current MSC secretome-based therapies, such as cellular senescence, donor variability, unstable secretome composition, and the need for cryoprotectants that reduce safety and efficacy.

Innovative edge:

- Immortalized and genetically stable MSC line (iHF-MSCs) allows continuous, donor-independent production.
- Optimized licensing protocol enhances immunomodulatory potency.
- Cryoprotectant-free lyophilization preserves full bioactivity and reduces formulation complexity.
- Highly concentrated (up to $\times 160$) without loss of bioactivity.
- Demonstrated in vivo efficacy in murine inflammatory models with versatile administration routes.
- Adaptable to various pharmaceutical forms (oral, topical, injectable, implants), enabling broad clinical applications.

Reference:

Prime-LS



Research group:

Micro and nano technologies,
Biomaterials and Cells-Nanobiocel

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IPR STATUS

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Applicant:

University of the Basque
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STAGE DEVELOPMENT

TRL-4

COOPERATION GOAL

Company interested in the
license and industrial
colaboration and new
venturing.