

Potential Mechanism of Action

Exosomes target cell renewal in male reproductive health;

- Supports spermatogenesis.
- Improves implantation success.



Stembio Kordon Kanı
Hücre & Doku Merkezi
Tübitak Martek Ar-Ge ve
Innovasyon Binası
Gebze, Kocaeli
www.stembio.com.tr
0850 800 6778



Mesenchymal Stem Cell Derived EXOSOMES

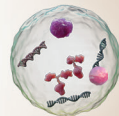


What is an Exosome?

Exosomes are protein-containing lipid vesicles obtained by special processes from the culture medium of cells containing many growth factors, which have the capacity to regulate cellular and biochemical events that play a role in cell renewal.

The injectable ExoShot exosome suspension allows the use of exosomes derived from umbilical cord Wharton jelly-derived mesenchymal stem cells in urological conditions. The use of mesenchymal stem cell exosomes demonstrates the potential to repair damaged tissues, reduce inflammation, promote new tissue formation and accelerate healing processes. Stimulates cell proliferation and migration.

- Promotes cell proliferation and migration.
- Increases angiogenesis.
- Regulates the immune system, inflammation, and immune response.
- Decreases scar formation.



How are Exosomes Produced?

Exosomes are obtained from umbilical cord accepted to Stembio Laboratory after undergoing all quality control processes in accordance with cGMP conditions. Mesenchymal stem cells separated from the tissue are multiplied in special culture dishes with cell-specific medium. Dead cell debris is removed from the culture medium. After the pre-treatment steps, exosomes are isolated by high-speed spinning using ultracentrifugation method. After the obtained exosomes pass quality control tests, the product is ready for use and stored under appropriate conditions.



GROWTH FACTORS AND THEIR EFFECTS IN



Factor	Type	Function
TGF- β (Transforming Growth Factor- β)	Growth Factor	Regulates cell growth, stimulates tissue repair.
VEGF (Vascular Endothelial Growth Factor)	Growth Factor	Stimulates angiogenesis processes.
EGF (Epidermal Growth Faktor)	Growth Factor	Stimulates cell proliferation and differentiation.
FGF (Epidermal Growth Faktor)	Growth Factor	Participates in cell proliferation, tissue repair and angiogenesis.
PDGF (Platelet-Derived Growth Factor)	Growth Factor	Stimulates cell proliferation and tissue repair.
IL-6 (Interleukin-6)	Cytokine	Regulates immune response and inflammation process
IL-10 (Interleukin-10)	Cytokine	Regulates immune response and occurs anti-inflammatory effects
IL-1Ra (Interleukin-1 Receptor Antagonist)	Cytokine	Regulates inflammation by competing with IL-1
TNF- α (Tumor Necrosis Factor- α)	Cytokine	Regulates inflammation process and stimulates cellular apoptosis