



MSC DERIVED EXOSOMES

Potential Mechanism of Action

Exosomes target cell renewal in female reproductive health;

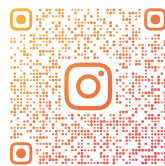
- Supports the development of endometrial tissue.^{1,2,3}
- Enlarges the ovarian follicle pool and increases the number of antral follicles.^{4,5}
- Supports implantation.^{1,6}
- Regulates immune response in patients with recurrent implantation failure.⁷

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Mesenchymal Stem Cell Derived EXOSOME



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.

Exogerm, supports reproductive success when used in combination with assisted reproductive techniques (IVF, etc.). Basically, it contributes to endometrial tissue development and regeneration through immune modulation and cellular communication mechanisms. In this way, implantation success is supported. Factors such as miR-200 family, Wnt, TGF- β , miR-21, BMP, VEGF contained in exosomes are thought to act through these mechanisms.

- Stimulates cell proliferation and migration.
- Restores the extracellular matrix.
- Increases angiogenesis.
- Regulates the immune system, inflammation, and immune response.
- Promotes tissue regeneration and collagen synthesis.

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 EXOGERM

Factor	Type	Function	Büyüme Faktörleri
TGF- β (Transforming Growth Factor- β)	Growth Factor	Regulates cell growth, stimulates tissue repair.	1496
VEGF (Vascular Endothelial Growth Factor)	Growth Factor	Stimulates angiogenesis processes.	3956,3
EGF (Epidermal Growth Faktör)	Growth Factor	Stimulates cell proliferation and differentiation.	372,3
FGF (Epidermal Growth Faktör)	Growth Factor	Participates in cell proliferation, tissue repair and angiogenesis.	1048,6
PDGF (Platelet-Derived Growth Factor)	Growth Factor	Stimulates cell proliferation and tissue repair.	22732