

RHEO™

**Flowable Cryopreserved Human
Amniotic Fluid Allograft with
Extracellular Matrix**



RHEO™ is a cryopreserved human tissue allograft derived from the extracellular matrix of the amniotic membrane. It is aseptically processed to preserve the cytokines, growth factors and scaffolding proteins from within the amniotic membrane matrix.

RHEO™ is intended for use in repair, reconstruction, replacement or supplementation of a recipient's cells or tissue by performing the same basic functions of amniotic membrane matrix in the recipient as it would in the donor.



The Benefits of Amniotic Tissue

While the impressive ability of amniotic tissue to enhance healing has been recognized for over a century, we're still learning about its capabilities. **RHEO™** is an injectable bioactive matrix that delivers intact ECM and numerous cytokines and growth factors, including:

Collagen, elastin, proteoglycans, and fibronectin to create a stromal scaffold for tissue development and repair.

Interleukins 4 and 10 (IL-4, IL-10) and prostaglandin E2 (PGE2), which are anti-inflammatory immunomodulators that suppress CD4+ and CD8+ T and B cell activate.

Growth factors such as EGF, VEGF, PDGF, bFGF, KGF, NGF, and TGF- α and TGF- β promote healing and tissue growth.

Hyaluronic acid, a critical ECM protein found in high concentrations in amniotic fluid, which reduces fibrotic scarring.

How Amniotic Allografts work

Amniotic fluid is composed of non-immunogenic, pluripotent stem cells that secrete paracrine-acting cytokines and growth factors. It's also rich in ECM, which serves as an avascular scaffold for tissue development. When these factors are injected into tissue that has been damaged or degraded, they have been shown to rapidly promote healing and tissue regeneration.

RHEO™ is carefully cryopreserved using our **CryoGen™** technology to ensure that it retains the structural and bioactive properties of amniotic tissue, and laboratory analyses demonstrate that **RHEO™** is enriched in growth factors.

Being an injectable amniotic allograft, **RHEO™** is ideal for challenging conditions difficult to treat with conventional methods.

In addition, flowable amniotic allografts have been shown to improve bone healing, regenerate nervous tissue, and prevent fibrogenesis.



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Advantages of Amniotic Allografts like RHEO™

- + Flowable Amniotic Allografts are readily available and facilitate quicker treatment, unlike other therapies such as Platelet-rich plasma (PRP), which require extraction and preparation.
- + Flowable Amniotic Allografts are a steroid-free alternative to treatments such as cortisone.
- + Flowable Amniotic Allografts are administered through an injection, thereby allowing regions with deep tissue damage to be treated without the need for invasive incisions.
- + Cryopreservation preserves structural integrity and active biologics, unlike dehydration which comprises the structure of tissue and almost completely destroys its crucial components.



SKUs

100-050-0500-001 - 0.5mL

100-100-1000-001 - 1.0mL

100-200-2000-001 - 2.0mL

References

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4. Sessarego, N., et al., Multipotent mesenchymal stromal cells from amniotic fluid: solid perspectives for clinical application. Haematologica, 2008. 93(3): p. 339-46.
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7. Hanselman, A.E., J.E. Tidwell, and R.D. Santrock, Cryopreserved human amniotic membrane injection for plantar fasciitis: a randomized, controlled, double-blind pilot study. Foot Ankle Int, 2015. 36(2): p. 151-8.
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