

# OROPRO™



**OROPRO™** is a cryopreserved human perinatal tissue allograft derived from the umbilical cord. **OROPRO™** is aseptically processed to preserve the endogenous cytokines, growth factors and other proteins. It is intended as a cushioning agent for homologous supplementation.



## The science behind OROPRO™

**OROPRO™** is an umbilical cord connective tissue allograft that is derived meticulously through our proprietary **BioRetain™** process that maintains its biologically active components.

Our proprietary controlled-rate freezing process also cryopreserves the allografts without significantly affecting viability.



## Endogenous Components of Umbilical Cord Tissue

- + **Mesenchymal stem cell (MSCs) attributes:** : MSCs are derived from a biologically young source, have viable MSC count, strong adherence, and antibodies such as immunophenotype CD73+, CD90+, and CD 105 that are consistent with MSC morphology.
- + **Bioactive ECM and Growth factors:** Adhesion G protein, platelet derived growth factor (PDGF), thrombospondin-2 (TSP2), and complement component 5a (C5a) promote wound healing.
- + **Cytokines:** : Fetuin-A, interleukin 37 (IL 37), macrophage colony stimulating factor (M-CSF), serpin A4, syndecan-4, cystatin-B, galectin-9, granulysin, lipocalin-2, and intracellular adhesion molecule 1 demonstrate anti-inflammatory and immunomodulatory activity.

## Advantages of OROPRO™

**OROPRO™** is a cryopreserved, human umbilical cord tissue allograft that is comprised of anti-inflammatory, anti-microbial, and anti-fibrotic cytokines and growth factors, as well as mesenchymal stem cells and an intact, biologically active ECM that provides the biomaterial for wound healing.

**OROPRO™** delivers an injectable, flowable tissue matrix that supplies the local microenvironment with cushion and support while various growth factors, cytokines and regulatory proteins promote tissue rehabilitation.

OROPRO™ is a perinatal tissue-derived allograft. It is designated as a Human Cell, Tissue, and Cellular and Tissue-Based Product (HCT/P) by the U.S. Food and Drug Administration (FDA), is minimally manipulated, and is produced in accordance with the FDA regulations for Good Tissue Practices (21 CFR 1270, 1271).