OrthoFlo SPORT

An Amniotic Fluid Allograft

- Protect & cushion
- Provide lubrication for enhanced mobility
- Reduce inflammation

What is OrthoFlo Sport?

Amniotic fluid, *in utero*, naturally functions to protect, cushion and lubricate.[1] Key elements of amniotic fluid include growth factors, carbohydrates, proteins, lipids, electrolytes, and other nutrients, as well as hyaluronic acid (HA), a principle component that provides viscosity and lubrication in the synovial fluid that surrounds joints.[1,2]

OrthoFlo Sport is an amniotic fluid allograft for homologous use to protect and cushion, provide lubrication for enhanced mobility, and reduce inflammation.

Since 2006, as the premier leader in regenerative medicine, MiMedx® has been dedicated to advancing healing through innovative biomaterial products and bioimplants.

MiMedx

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Regulatory Factors

OrthoFlo Sport contains an array of well-known regulatory proteins, growth factors, cytokines, and chemokines that are naturally occurring in amniotic fluid and the fluid surrounding many joints. Some of the bioactive factors contained within OrthoFlo Sport include:

- **Interleukin 1 Receptor Antagonist (IL-1ra):** Antagonist of IL-1 signaling which is known to be involved in cartilage degeneration
- **Tissue Inhibitor of Metalloproteinases (TIMPs):** Inactivates a number of matrix metalloproteinases responsible for cartilage degradation

Biological Activity

Proliferation and hyaluronic acid production by cells in response to OrthoFlo Sport were measured in normal human synoviocytes. Normal human synoviocytes from healthy donors were cultured in the presence of OrthoFlo Sport, either at 0.2 or 0.8 mg/mL. OrthoFlo Sport significantly increased cell number after 3 days compared to basal medium, as shown below in Figure 1, indicating that OrthoFlo Sport promoted proliferation of human synoviocytes.

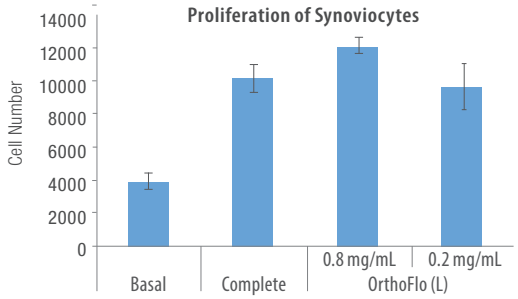

Figure 1. Proliferation of human synoviocytes in response to OrthoFlo Sport after 3 days

OrthoFlo Sport significantly increased hyaluronic acid concentration after 3 days compared to basal medium, as shown below in Figure 2, indicating that OrthoFlo Sport promoted production of hyaluronic acid by human synoviocytes.

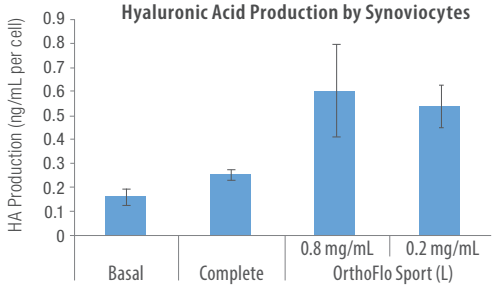

Figure 2. Production of hyaluronic acid by human synoviocytes in response to OrthoFlo (L) after 3 days

OrthoFlo Sport Maintains Amniotic Fluid Profile

The SDS-PAGE gel below in Figure 3 illustrates the composition and relative abundance of proteins, separated by molecular weight, for OrthoFlo Sport compared to fresh amniotic fluid. The protein composition of OrthoFlo Sport appears very similar to fresh amniotic fluid with a nearly identical pattern of protein bands.

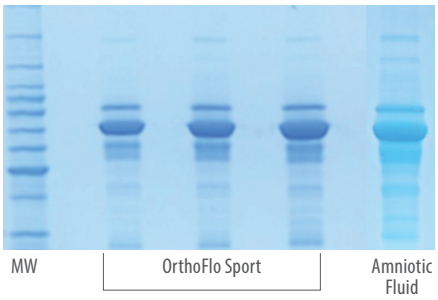

Figure 3. Protein composition of OrthoFlo Sport compared to fresh amniotic fluid

Ease of Use

- Dried for ease of use and application
- Five year shelf life at ambient conditions; no special storage required
- Terminally sterilized to reduce risk of infectious disease transmission

Application

- OrthoFlo Sport is a human amniotic fluid allograft, donated by mothers delivering healthy babies by scheduled Caesarean section
- OrthoFlo Sport is intended for single use only
- OrthoFlo Sport may be mixed with sterile saline. Refer to "Instructions for Use" included with product for full application instructions and recommendations.

Product Offering

Item Number	Size
LS-0050	0.5 mL
LS-0100	1 mL
LS-0200	2 mL
LS-0400	4 mL

OrthoFlo Sport is procured and processed in the United States according to standards and/or regulations established by the American Association of Tissue Banks (AATB) and the United States Food & Drug Administration (FDA).

Ordering Information: Customer Service: 866.477.4219 Email: customerservice@mimedx.com

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1. Underwood MA, Gilbert WM, Sherman MP, J Perinatol, 2005 25(5): 341-8. **2.** Hui AY, McCarty WJ, Masuda K, Firestein GS, Sah RL, Wiley Interdiscip Rev Syst Biol Med. 2012 Jan-Feb;4(1):15-37.