

VIAGENEX[™]

VIAGENEX™ is a family of amniotic allografts processed to retain the inherent mechanical properties of amniotic tissue and rich supply of extracellular matrix, growth factors and cytokines.^{1,2}

>> VIAGENEX AMNIOTIC ALLOGRAFT FEATURES AND BENEFITS

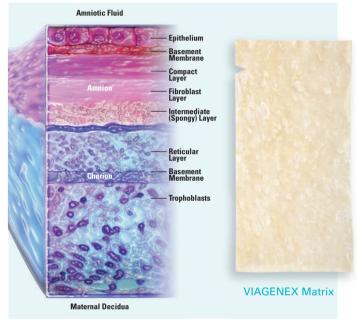
Amniotic-derived tissues may be used as a soft tissue barrier and wound covering that retains endogenous extracellular matrix (ECM), growth factors and cytokines²⁻⁵ essential for signaling. The properties of amniotic tissue help provide mechanical protection⁶ to damaged tissue while retaining nutrient-rich growth factors.⁷⁻⁹

WHY VIAGENEX MATRIX AMNION/CHORION ALLOGRAFT

- Amniotic tissue acts as a mechanical barrier between mother and fetus as well as an immune-privileged protective barrier during fetal development.¹
- VIAGENEX applied as a soft tissue and wound covering helps provide the same mechanical protection to support the damaged tissue.⁵
- VIVEX's Integrity Processing™ retains the intermediate (spongy) layer and preserves the inherent properties of amniotic tissues, maintaining key extracellular matrix molecules, proteins, carbohydrates, growth factors and cytokines.⁷
- VIAGENEX Matrix:
 - 5-year shelf life for room temperature storage
 - No upfront preparation hydrates in site
 - 4X thicker than single layer amniotic allografts

WHY VIAGENEX MAX UMBILICAL CORD MEMBRANE ALLOGRAFT

- Thickest amniotic membrane allograft, 800-1,000µm (1mm)
- Retains inherent extracellular matrix components, growth factors and cytokines
- · Robust enough to be sutured in place
- · Excellent handling properties
- VIAGENEX Max:
 - 5-year shelf life for room temperature storage
 - No upfront preparation hydrates in site
 - 2X thicker than amnion/chorion amniotic allografts





KNOWN GROWTH FACTORS AND EXTRACELLULAR MATRIX (ECM) PROTEINS IN AMNIOTIC ALLOGRAFTS AND THEIR CORRESPONDING ROLE ^{28,29}

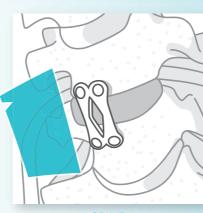
GROWTH FACTORS	ROLE	ECM PROTEINS	ROLE
MCP-1 ²⁵ , IL1-RA ²¹ , TGF-β1&2 ¹⁶ , IL6 ²¹	Immune Modulation / Anti-Inflammatory	Collagen, type I-VII	Main structural protein component in the body
TNF-α ²⁶ , GRO-α ²⁴ , HGF ¹² , IGF1&2 ^{13,15} , VEGF ¹⁷ , βFGF ¹⁸ , PDGFα&β ²⁰ , Ang ²²	Angiogenesis	Fibronectin	Binding protein agent, supports initial cell attachment
EGF ¹⁹ , FGF ¹⁸ , TGFβ ¹⁶ , TIMP(1-4) ¹⁰ , HGF ¹¹	Cell Growth	Hyaluronic Acid	Lubricating hydrophilic protein that coats cells and aids in hydrodynamic movements
PDGFα&β ²⁰ , EGF ¹⁹ , TIMP-2&-3 ¹⁰ , HGF ¹¹ , Ang ²² , KGF ²³	Cell Migration	Laminin	High molecular weight protein to which cells easily bind and migrate across
PDGFα&β ²⁰ , EGF ¹⁹ , FGF ¹⁸ , TGF-β1&2 ¹⁶ , IGF1&2 ¹⁴ , Ang ²² , KGF ²³	Cell Proliferation	Proteoglycans	Connective proteins that fill the spaces between cells in tissue and affect the stability of the
PDGFα&β ²⁰ , EGF ¹⁹ , TIMP-2& -3 ¹⁰ , TGF-β1&2 ¹⁶	Cell Differentiation	-	proteins and growth factors

THE PROPRIETARY INTEGRITY PROCESSING™ PRESERVES UP TO **600+ SIGNALING PROTEINS IN VIAGENEX MATRIX AND MAX³⁰**

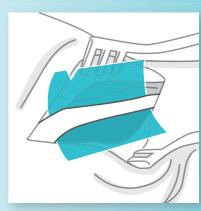
> POTENTIAL CLINICAL APPLICATIONS

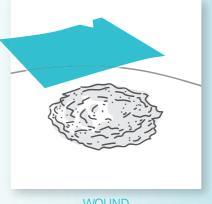
In general orthopedics, arthroplasty, hand and wrist, and foot and ankle procedures, VIAGENEX has been used as a protective barrier to provide essential mechanical protection^{6,27} for surgically traumatized tissues. Other potential clinical applications for VIAGENEX include:

- Spine & Neurosurgery
- Wound Care
- Burn Care
- Oral Surgery
- Shoulder
- Nerves
- Knees
- Tendons
- · OB/GYN
- Urology











WOUND

VIAGENEX[™]



>> SAFE AND TRUSTED PARTNER

VIVEX Biologics is a regenerative solutions company, focusing on patient care through the innovation of tissue and biologic-based therapies in Wound Care, Ortho-Fusion and Interventional Pain. With more than 50 years of highly safe and effective operations, VIVEX aims to provide advanced regenerative solutions.

- · Amniotic tissue is recovered from healthy mothers at live births.
- Handled and processed in accordance with both FDA regulations and AATB standards.
- · VIVEX has distributed over 1 million allografts since 2010.
- No reported adverse events and no reported disease transmission.

>> ORDERING INFORMATION

CATALOG NUMBER	DESCRIPTION	SIZE	
VIAGENEX MATRIX	AMNION/CHORION ALLOGRAFT		CORRECT
VGM020600S	VIAGENEX™ Matrix Amnion Allograft	2x6cm	CORRECT
VGM040400S	VIAGENEX™ Matrix Amnion Allograft	4x4cm	
VGM040600S	VIAGENEX™ Matrix Amnion Allograft	4x6cm	
VGM040800S	VIAGENEX™ Matrix Amnion Allograft	4x8cm	
VGM021200S	VIAGENEX™ Matrix Amnion Allograft	2x12cm	
VGM070600S	VIAGENEX™ Matrix Amnion Allograft	7x6cm	Epithelial side up
VIAGENEX MAX	UMBILICAL CORD MEMBRANE ALLOGRAFT		INCORDECT -
VGC020300S	VIAGENEX™ Max Umbilical Cord Membrane	2x3cm	INCORRECT
VGC030300S	VIAGENEX™ Max Umbilical Cord Membrane	3x3cm	
VGC030400S	VIAGENEX™ Max Umbilical Cord Membrane	3x4cm	
VGC030500S	VIAGENEX™ Max Umbilical Cord Membrane	3x5cm	
VGC030600S	VIAGENEX™ Max Umbilical Cord Membrane	3x6cm	
VGC030800S	VIAGENEX™ Max Umbilical Cord Membrane	3x8cm	

Product HCPCS Code: Q4100, per sq cm

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- 1. Rowlatt, U. (1979), Intrauterine wound healing in a 20-week human fetus. Virchows Arch A Pathol Anat Histol, 381(3), 353-361
 2. Coolen, N.A. et al. (2010). Comparison between human fetal and adult skin. Archives of Dermatological Research, 302(1), 47-55.
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 4. Tsang SC, Espans EM, Kawakita J, et al. How does ammicis membrane work? Coult Surf 2004/2(3):177-187.
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 5. Masciantonio MG, et al., "Matrix Metalloproteinases and Tissue Remodelling in Health and Disease: Cardiovascular Remodelling" Prog in Mol Bio & Trans Sci., 2017
 5. Minan Deng, et al. "Umblicial Cord-derived Mesenchymal Stem Cells Instruct Monocytes Towards and Li Dyroducing Phenotype by Secreting ILe and HGF" Scientif

VIVEX Biologics will use reasonable efforts to provide accurate and complete information herein, but this information should not be construed as providing clinical advice, dictating reimbursement policy or as a substitute for the judgment of a health care provider. It is the health care provider's responsibility to determine the appropriate treatment, codes, charges for services and use of modifiers for services rendered and to submit coverage or reimbursement-related documentation.

