D-FIBER

Demineralized Cortical Fiber Matrix

Introducing D-FIBER by Berkeley Biologics

Discover a game-changing alternative to cellular viable bone allografts, offering competitive osteoinductive and osteogenic capabilities.[1,2] Experience exceptional handling and superior osteoconduction, setting a new standard for performance with safety in bone regeneration across a wide array of orthopedic and spinal applications.

- **Proprietary Formulation:** Includes demineralized cortical particulates, demineralized cortical fibers, and periosteum. Our proprietary processing technology preserves the native bone matrix and maximizes its regenerative potential compared to conventional methods.
- **Enhanced Handling:** Long fibers and periosteum improve handling properties and preserve angiogenic growth factors. Superior cohesiveness and molding into the implantation site, adaptable to any defect shape.
- **Growth Factors:** greater bioavailability of growth factors to drive osteoinduction, osteogenesis, and angiogenesis[1,2].
- **Quality Assurance:** Proprietary precision dose sterilization provides a sterility assurance level (SAL) of 10^{-6} via low-dose, low temperature e-beam irradiation.
- **Minimal Preparation:** Fast thaw time (~5-15 min), no decanting or rinsing required.

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BERKELEY BIOLOGICS

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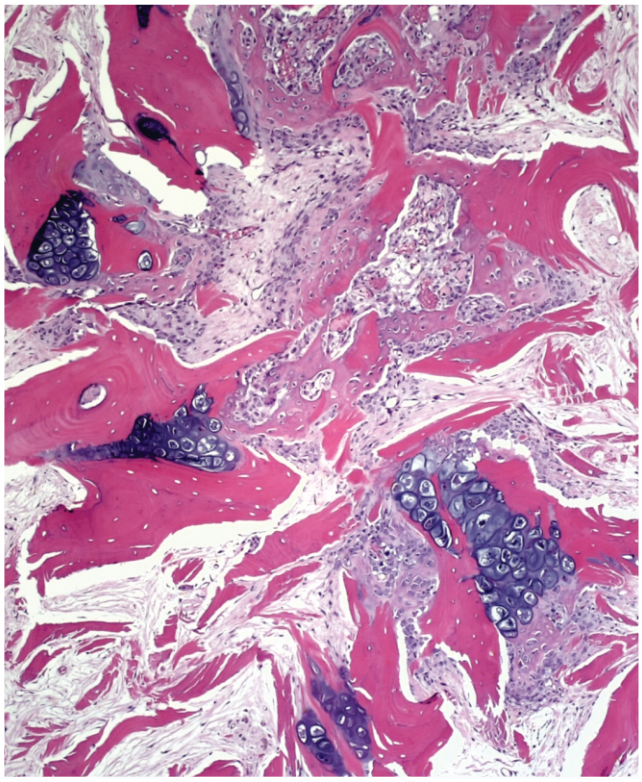
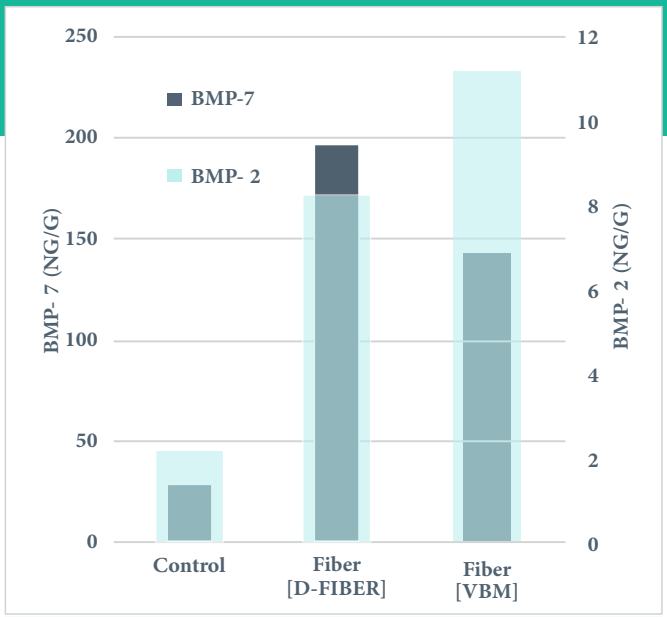
D-FIBER has demonstrated substantial levels of endogenous osteoinductive, osteogenic, and angiogenic growth factors in *in vitro* assays. These growth factors are essential for stimulating the differentiation and proliferation of bone-forming cells.[3,4] During its development, D-FIBER was tested for 41 growth factors, and significant levels of BMP-2, BMP-4, BMP-6, BMP-7, BMP-9, aFGF, bFGF, IGF-1, PDGF-BB, TGFb1, TGFb2, and TGFb3 were detected.

In addition, in vivo testing has confirmed D-FIBER's ability to promote robust bone formation, demonstrating its effectiveness in supporting the body's natural bone repair and regeneration processes.[2]



A histology slide with H&E staining, 28 days post-implantation, shows new bone marrow formation. The dark red ribbon-like structure is the D-FIBER implant. New bone formation along the implant's edge is bordered by osteoblasts. Chondrocytes appear as dark-purple cell clusters between fiber strands, while osteocytes are visible as dark spots scattered within the fiber strands, infiltrating the implant.



D-FIBER demonstrates comparable osteoinductive properties to viable bone allograft, while maintaining a strong safety profile.

Choose D-FIBER for a superior solution in bone repair and regeneration, guaranteeing optimal outcomes and patient safety. With over 60 years of expertise in processing and developing human tissue, Berkeley Biologics offers a product that closely mimics native bone structure and ensures exceptional handling properties

ORDERING INFORMATION

Frozen	Freeze-dried	Dose
DBFM-0001	DBFM-0001-FD	1cc
DBFM-0002	DBFM-0002-FD	2cc
DBFM-0005	DBFM-0005-FD	5cc
DBFM-0010	DBFM-0010-FD	10cc

1., 2. Data on file at Berkeley Biologics

3. Hosaka, K. et al. "Dual roles of endothelial FGF-2–FGFR1–PDGF-BB and perivascular FGF-2–FGFR2–PDGFRβ signaling pathways in tumor vascular remodeling." Cell Discov 4, 3 (2018).

4. Cao, R. et al. "Angiogenic synergism, vascular stability and improvement of hind-limb ischemia by a combination of PDGF-BB and FGF-2." Nat Med 9, 604–613 (2003).

Customer Service and Ordering
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