

FreezOpt™ by HOHCells
Spec Sheet v1.0

Product Overview: FreezOpt™ is an innovative cryopreservation accessory designed to promote controlled ice initiation during standard freezing protocols. By providing a reproducible nucleation trigger, FreezOpt™ helps reduce freeze-to-freeze variability associated with uncontrolled spontaneous supercooling. The product integrates seamlessly into existing workflows without requiring changes to cryoprotectant composition, cooling rate, or freezing equipment. Performance is independent of vial volume, container brand, or cryoprotectant formulation within standard ranges.

- Key Features**
- Promotes controlled ice initiation during freezing
 - Reduces variability from uncontrolled spontaneous ice nucleation
 - Compatible with standard cryovials and freezing containers
 - Designed for stress-sensitive cells, spheroids, organoids, and tissues
 - No changes to DMSO concentration or standard protocols required

- Compatibility**
- Standard cryovials (0.5–5 mL)
 - Common freezing containers and freezing systems
 - Standard cryoprotectants (e.g., 10% DMSO formulations)
 - Manual and controlled-rate freezing workflows

- Typical Workflow**
1. Place one FreezOpt™ seed into the cryovial prior to freezing
 2. Prepare samples using standard cryopreservation protocols
 3. Freeze and thaw using existing equipment and procedures

Supported Sample Types

FreezOpt™ has been evaluated with select mammalian cell types and 3D biological models. Based on its physical mechanism of action, the technology is expected to be compatible with a wide range of stress-sensitive cells and biological samples, including stem cells, primary cells, spheroids, organoids, and tissues, although not all sample types have been tested.

- Ordering & Regulatory**
- **Product:** FreezOpt™ Controlled Ice Initiation Seed
 - **Catalog #:** DEV-FRZ-001
 - **Standard Pack size:** 96 units | **Custom formats:** Available upon request

Parameter	Specification
Format	Individual ice initiation seed
Dimensions	~3 mm × 5 mm
Composition	SiO ₂ particles in a biocompatible polymer matrix
Mechanism	Physical trigger for ice initiation
Use	Single use
Sterility	Manufactured under controlled conditions to ensure sterility
Storage	Room temperature; dry
Packaging	Pack of 96 units

Technical Specifications

For Research Use Only (RUO). Not for diagnostic or therapeutic use.
Protected by issued and pending patents.

