A PRODUCT BY

HOHCells

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CUSTOM REQUESTS & INQUIRIES

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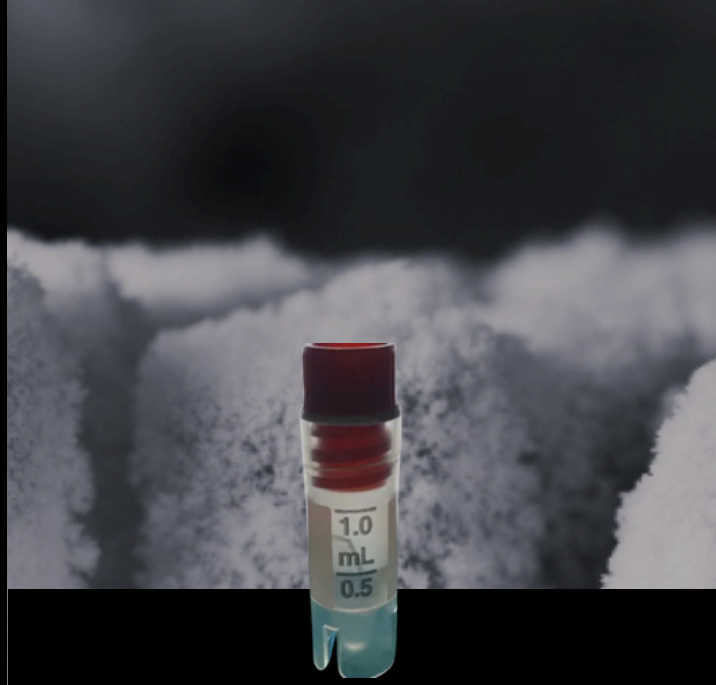

aiCryovial™

AUTOMATIC ICE-SEEDING

a better way to freeze your cells,
without changing anything else.

automatic, consistent, high survival.

cell freezing made **simpler**, cell quality made **better**.

aiCryovial is new type of cryogenic vial capable of seeding ice automatically and consistently at a high subzero temperature. This eliminates the need for manual seeding or expensive controlled-rate freezers while ensuring consistently high survival and functional preservation of cells, tissues, and organoids.

research-proven results across all metrics.

Researchers at the Multiscale Biomaterials Engineering Laboratory at the University of Maryland demonstrated over 90% viability in human induced pluripotent stem cells (iPSCs) frozen using aiCryovial, compared to 50% survival using traditional vials (Jiang 2021). Their results also show the robust preservation of functional and differentiation capabilities indicative of high quality freezing and recovery. Additionally, their studies with mouse ovarian follicles—delicate, layered structures comprised of 3 different cell types—show that aiCryovial enables long-term survival and 4x greater growth of ovarian follicles (Stewart 2024).

1. Jiang B, Li W, Stewart S, Ou W, Liu B, Comizzoli P, He X. Sand-mediated ice seeding enables serum-free low-cryoprotectant cryopreservation of human induced pluripotent stem cells. Bioactive Materials. 2021;6(12):4377–4388. doi:10.1016/j.bioactmat.2021.04.025
2. Stewart S, White A, Ou W, Liu W, Nagashima J, Songsasen N, He X. Controlled ice nucleation with a sand-PDMS film device enhances cryopreservation of mouse preantral ovarian follicles. Journal of Medical Devices. 2024 Sep 6:1–27. doi:10.1115/1.4066445

inspired by nature, engineered to nurture.

Natural sand is an inert, biocompatible material with powerful ice-nucleating capabilities. Embedded in polydimethylsiloxane (PDMS), a widely-trusted silicone polymer, and integrated into the walls of cryogenic vials, sand enables safe slow-freezing of biological materials. aiCryovial also minimizes the concentration of toxic cryoprotectants required for cell freezing and eliminates the need for serum completely, making aiCryovial ideal for both laboratory and clinical applications.