cool cells, hot research

Keep your cells protected and your experiments on track with our special cryopreservation bundle.

- Cell Freezing Reagents
- Cryogenic Vials
- Storage Racks
- Protective Gloves

With everything you need in one package, saving your cells becomes seamless so you can focus on what really matters: making great discoveries!

Don’t miss out on this limited-time deal! Use promo code **IIH** at checkout.

Description	Product code	Discount
Dimethyl sulfoxide		
Hybri-Max™, sterile-filtered, BioReagent, suitable for hybridoma, ≥99.7%	D2650	40%
Hybri-Max™, 0.2 µm filtered, BioReagent, suitable for hybridoma, ≥99.7%, Ampoule	D2653	40%
≥99.5% (GC), suitable for plant cell culture	D4540	40%
sterile-filtered, BioPerformance Certified, meets EP, USP testing specifications, suitable for hybridoma	D2438	40%
meets EP testing specifications, meets USP testing specifications	D1435	40%
Cell Freezing/Cryopreservation Media		
Cell Freezing Medium-DMSO 1×	C6164	20%
	C6295	20%
CryoSOfree™ DMSO-free Cryopreservation Medium	C9249	20%
CryoStor® cell cryopreservation media	C2874	20%
CryoStor® cell cryopreservation media	C2999	20%
HypoThermosol® FRS Preservation Solution	H4416	20%
NEW Cryo-DMSO-F cryopreservation medium serum-free, protein-free, animal origin-free, and DMSO-free"	C9252	25%

NEW

CRYO-DMSO-F *is a fully defined, DMSO-free cryopreservation medium for ultra-low temperatures (-80°C to -196°C). It’s serum-free, protein-free, and animal origin-free—ideal for sensitive cells like CAR-T, NK, and stem cells. Key benefits include quick, ready-to-use formulation, improved functionality without DMSO, and sterile filtration to reduce contamination risks*

Description	Product code	Discount
Cryogenic Vials and Storage Racks		
MTC™ Bio Sterile Cryogenic Vials, capacity 5 mL, thread style external	MTCV3805-500EA	30%
MTC™ Bio Sterile Cryogenic Vials, capacity 2 mL, thread style internal	MTCV4802-500EA	30%
MTC™ Bio Locking Rack for Cryogentic Vials, to hold, 5 x 10 cryovials	MTCV5920-4EA	30%
MTC™ Bio Cap Inserts for Cryogenic Vials, green	MTCV5809G-500EA	30%
MTC™ Bio Cap Inserts for Cryogenic Vials, assorted colors	MTCV5809A-500EA	30%
MTC™ Bio Cap Inserts for Cryogenic Vials, white	MTCV5809W-500EA	30%
Nalgene® cryogenic vials, capacity 2.0 mL, sterile, External threads	V5007-500EA	30%
Nalgene® cryogenic vials, capacity 2.0 mL, sterile, External threads, pkg of (Bulk packed)	V5132-1000EA	30%
Corning® cryogenic vials, internal thread, capacity 2.0 mL, bottom, round, seal, washer, self-standing, case of 500	CLS430488-500EA	25%
BRAND® cryogenic tube with screw cap, capacity 2 mL, Internal thread, self-standing	BR114841-1000EA	15%
Nalgene® CryoBox™, 9 × 9 Array For 1.2 and 2.0 mL vials	R0888-4EA	30%
Nalgene® CryoBox™, CryoBox 100, 10 × 10 array	Z359017-10EA	30%
Protective Gloves		
Cryo-gloves®, size L, water-resistant	Z183520-1PAK	10%
Cryo-gloves®, size M, water-resistant	Z183512-1PAK	10%
Cryo-gloves®, size L, waterproof	Z183563-1PAK	10%
Cryo Labels		
Cryo-Babies® Labels, white, L × W 1.28 in. × 0.5 in., roll of 1000 labels	Z366218-1PAK	30%
Laser Cryo-Tags®, white, L × W 1.5 in. × 0.75 in.	Z688584-1PAK	30%
Laser Cryo-Babies®, L × W 15/16 × 1/2, white	Z742254-1PAK	30%

Visit our Cell Freezing Reagents webpage to discover our comprehensive offer; apply promo code **IIH** and save up to 40%.

Offer expires on 31 December 2025

Cell Freezing Tips and Tricks*

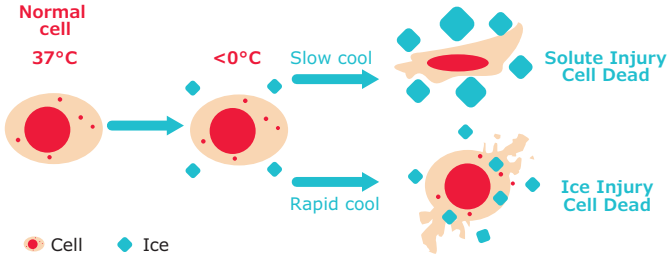
*ECACC Laboratory Handbook 4th Edition

Cryopreservation of cell lines preserves valuable laboratory resources. Improper freezing can damage cells, disrupt experiments, and negatively affect data collection.

Cryopreservation of Cell Lines
Significant developmental work has been done to ensure successful cryopreservation and resuscitation of various cell lines. The key principle is a slow freeze and quick thaw. Generally, cells should cool at –1 °C to –3 °C per minute and thaw quickly in a 37 °C water bath for 3-5 minutes.

Following these guidelines and the points below will help achieve successful cryopreservation for most cell lines.

1. Cultures must be healthy with >90% viability and no microbial contamination.
2. Use cultures in the log phase of growth, achieved by using pre-confluent cultures and changing the medium 24 hours before freezing.
3. Use a high concentration of serum/protein (>20%), often 90%.
4. Employ a cryoprotectant like dimethyl sulphoxide (DMSO) or glycerol to protect cells from ice crystal rupture. DMSO at 10% is common, but glycerol is an alternative when DMSO induces differentiation (refer to ECACC data for the correct cryoprotectant). Ready-made cell freezing media with DMSO, glycerol, and serum-free options are available.
5. Slow freezing at approximately 1 °C per minute using a Nalgene Mr. Frosty or Corning Cool Cell Freezing Container can enhance cryopreservation success.



Cell cryopreservation mechanism. Cryoprotectants, such as DMSO or glycerol, may be added to cell culture media as a cryoprotectant for cells. DMSO reduces ice crystal formation and thereby prevents cell death during the freezing process. Approximately 10% v/v may be used with a slow-freeze method (decreasing the temperature approximately 1°C per minute) and the cells may be frozen at −80 °C (−112 °F) or stored in liquid nitrogen for extended periods of time.

Tiered Cell Banking System

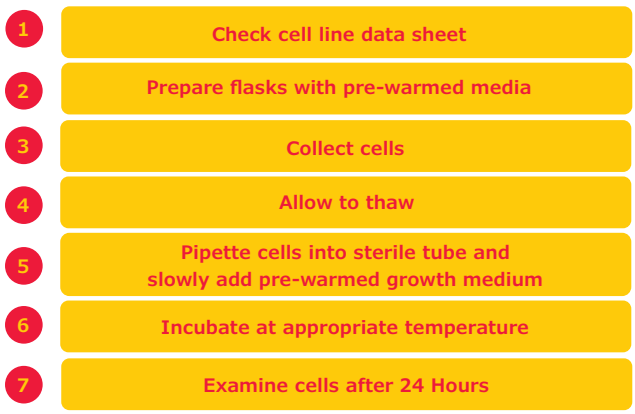
Upon acquiring a new cell line, a small set of 3–5 ampoules is frozen as a "token" stock before creating a master cell bank (MCB). One ampoule is tested for mycoplasma; if it fails, the process stops. If successful, another ampoule is resuscitated to produce an MCB of 10–20 ampoules, verified through quality checks like viability, cell count, mycoplasma tests, and cell line authentication (e.g., STR profiling). If any tests fail, the banking procedure must be repeated.

Once the MCB is acceptable, a working cell bank (WCB) is prepared by expanding cells from one MCB ampoule, typically ranging from 20 to 200 ampoules. Similar quality checks are performed. Before using any WCB ampoule, tests must confirm cell viability, absence of contaminants, and correct identity. Cells should only remain in culture for a limited number of doublings to prevent genetic drift; once this limit is reached, the WCB is replenished from new MCB ampoules.

It's crucial to maintain enough master cell ampoules for future WCB generation. If stocks fall below five ampoules, a fresh MCB can be constructed. Regulatory authorities may require additional tests like viral screening or karyotype checks. Consistent documentation of bank size, freezing dates, passage numbers, and QC results is vital for reproducible research and production.

Thawing of Frozen Cell Lines

1. Read the cell line data sheet for specific requirements.
2. Label flasks with the cell line name, passage number, and date.
3. Collect an ampoule from liquid nitrogen, handling with care to avoid explosion.
4. In a safety cabinet, disinfect the ampoule cap with 70% alcohol, then thaw in a 37 °C water bath for 1-2 minutes.
5. NOTE: Do not immerse the ampoule completely to reduce contamination risk.
6. Wipe the ampoule with 70% alcohol before opening.
7. Transfer the entire ampoule content to a sterile tube, adding 5 mL pre-warmed medium. Determine viable cell density with trypan blue and adjust for seeding density.
8. For adherent cells, adjust medium volume to recommended seeding density; a pre-centrifugation step is usually unnecessary. For immediate use, consider pre-centrifugation.
9. For suspension cells, centrifuge at 150 x gfor 5 minutes to remove cryoprotectant, then resuspend in fresh medium.
10. Incubate at the recommended temperature and CO2 level; use vented caps for gaseous exchange.
11. Examine cells microscopically after 24 hours and sub-culture as needed.



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