NCI-H1770 [H1770]

CRL-5893™

Description

NCI-H1770 [H1770] are neuroendocrine cells isolated from the lungs of a 57-year-old, White male patient with stage 4 non-small cell lung cancer: carcinoma.
Organism: *Homo sapiens*, human
Cell Type: neuroendocrine cell
Tissue: Lung
Age: 57 years
Gender: Male
Growth properties: Suspension, multicellular aggregates
Disease: Carcinoma; Non-small cell lung cancer; Stage 4

Storage Conditions

Product format: Frozen

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 1

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local

or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Temperature: 37°C

Handling Procedures

Unpacking and storage instructions:

1. Check all containers for leakage or breakage.
2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use.

Complete medium:

The base medium for this cell line is ACL-4 (DMEM:F12 + 1X ACL-4 Cocktail (0.02 mg/mL Human Insulin+ 25 nM Sodium Selenite + 10 uM Ethanolamine + 10 uM Phosphorylethanolamine + 100 pM Triiodo-L-thyronine + 5 mg/mL Bovine Serum Albumin + 0.5 mM Sodium Pyruvate + 10 mM HEPES + 2 mM L-glutamine + 50 nM Hydrocortisone) + 5 mg/mL Bovine Serum Albumin + 0.01 mg/mL Transferrin + 1 ng/ml EGF).

Example media preparation:

- 475 mL DMEM:F12 (ATCC 30-2006)
- 25 mL ACL-4 20X Cocktail (See preparation notes below)
- 20 X ACL-4 cocktail is made up of:
  - 24 mL RPMI
  - 40 mL of 4 mg/mL Human Insulin
  - 40 mL of 5 uM Sodium Selenite
  - 8 mL 10 mM Ethanolamine
  - 8 mL of 10 mM Phosphorylethanolamine
  - 7 uL 30 uM Triiodo-L-thyronine
  - 40 mL of 100 mM Sodium Pyruvate
  - 80 mL 1 M HEPES
  - 80 mL 200 mM L-glutamine
  - 80 mL 5 uM Hydrocortisone
- 7 mL Bovine Serum Albumin (Sigma catalog # A7979 or equivalent)

Because of limited stability, the following components should be added to an aliquot of the above culture medium fresh prior to seeding or performing fluid additions. Complete medium with the below components can be stored at 2.0 to 8.0°C and expires in 7 days.

- Transferrin, 1 mg/ml stock: use 10 ul per mL culture medium

  Note: Transferrin is stable at 2-8°C for up to 7 days. Do not use Transferrin which has been at 2-8°C for more than 7 days.

- EGF, 1 ug/mL stock (see preparation notes below): use 1 ul per mL culture medium

  To prepare a 1 pg/mL EGF stock solution, aseptically combine:

  - 1 vial of 10 pg Gibco EGF (ThermoFisher Scientific catalog # PHG0314)

- 10 mL PBS with 0.1% BSA or equivalent

Note: Aliquot in working volumes and store at -20°C. Avoid Freeze/thaw cycles. EGF is stable for 1 year after reconstitution when prepared and stored as indicated above.

Freeze Medium: Complete Culture medium + 10% FBS (ATCC 30-2020)

Handling Procedure:

To insure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C. Storage at -70°C will result in loss of viability.

1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes).
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 150 to 400 x *g*; 8 to 12 minutes (300 x *g* for 8 minutes).
4. Resuspend cell pellet with the recommended complete medium (see the lot information on Certificate of Analysis (COA) for the culture recommended dilution ratio) and dispense into a 25 cm^2 or a 75 cm^2 culture flask as recommended on the COA. **Note:** This cell line recommends a starting dilution instead of a cell density requiring cell counting because these cells tend to grow in aggregates that may lose viability when they are dispersed. Accurate counts and viabilities may not be possible. It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the complete growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).
5. Incubate the culture at 37°C in a suitable incubator. A 5% CO_2 in air atmosphere is recommended if using the medium described on this product.

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Subculturing procedure:
Cultures can be maintained by the addition of fresh medium. Cells grow as floating aggregates of round cell clusters.

Subculture Restrictions: Subculture when there are numerous, healthy appearing clusters present in suspension.
Note: Full fluid changes must be performed every 7 days. To perform a full fluid change, centrifuge the cells, discard the supernatant, and gently resuspend the cells in fresh media.
Medium Renewal: Add fresh medium as cell density increases.
Reagents for cryopreservation: Complete growth medium supplemented with 10% (v/v) FBS and 5% (v/v) DMSO (ATCC 4-X)

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: NCI-H1770 [H1770] (ATCC CRL-5893)

References

References and other information relating to this material are available at www.atcc.org.

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