# NCI-H1581 [H1581]

## CRL-5878™

## Description

NCI-H1581 [H1581] are large cells exhibiting epithelial morphology that was isolated from the lungs of a 44-year-old, White male patient with stage 4 non-small cell lung cancer. This product has applications in cancer research.

**Organism:** *Homo sapiens*, human
**Cell Type:** large cell
**Tissue:** Lung
**Age:** 44 years
**Gender:** Male
**Morphology:** epithelial
**Growth properties:** Mixed: adherent and suspension
**Disease:** Non-small cell lung cancer; Stage 4

## Storage Conditions

**Product format:** Frozen
**Storage conditions:** Vapor phase of liquid nitrogen

## 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 complete medium for this cell line is ACL4 [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 + 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].

**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 growth medium and spin at approximately 125 x g for 5 to 7 minutes.
4. Resuspend cell pellet with the recommended complete growth medium (see the specific batch information for the culture recommended dilution ratio). and dispense into a 25 $cm^2$ or a 75 $cm^2$ culture flask. 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 sheet.

**Subculturing procedure:**

Cultures can be maintained by the addition of fresh medium. Cells grow mostly as floating aggregates of round cell clusters with some attached cells. Clusters are alive while single cells have very low viability. Attached cells can be shaken loose.

**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-H1581 [H1581] (ATCC CRL-5878)

## References

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

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## Revision

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