

## Human Thyroid Carcinoma Cell Line (Undifferentiated) , #TTA1

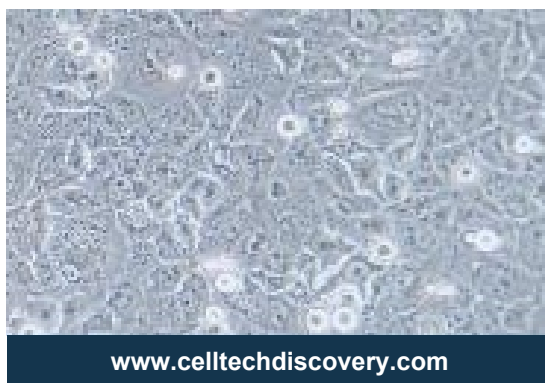
Human Thyroid Carcinoma Cell Line (Undifferentiated) , #TTA1 is an established tumor-derived cell line for in vitro oncology research.

Cancer-cell models help researchers connect changes in signaling with malignant growth and survival.

Applications include studies of proliferation, survival signaling, cytotoxicity and comparative responses to experimental treatments.

|                     |                     |
|---------------------|---------------------|
| CTDS SKU            | CDS10446            |
| Pack size           | 1 x 1 million cells |
| Product category    | Cell Lines          |
| Product subcategory | Cancer Cell Lines   |

### PRODUCT IMAGE



### PRODUCT BACKGROUND

Human Thyroid Carcinoma Cell Line (Undifferentiated), #TTA1 is an established tumor-derived cell line for in vitro oncology research. It is suitable for studies of tumor cell biology, proliferation and viability, signaling, biomarkers, drug response, cytotoxicity and cell-based assay development. The model can be incorporated into screening and mechanistic workflows under validated culture conditions. For research use only.

### APPLICATIONS

#### 1. Cancer Biology Research

Mechanistic Studies

Gene Function Studies

Signal Transduction

#### 2. Drug Discovery and Development

Screening of Anticancer Compounds

IC50/EC50 Studies

Mechanism of Action

Combination Therapies

#### 3. Assay Development

ELISA and Immunoassays

Flow Cytometry Assays

Reporter Gene Assays

#### 4. Omics and Biomarker Research

Transcriptomics / Genomics

Proteomics

Metabolomics

## 5. Tumor Heterogeneity and Resistance Mechanisms

Clonal Selection

Acquired Resistance Models

## 6. Personalized Medicine and Precision Oncology

Patient-Derived Cell Lines

Companion Diagnostics

## 7. Immuno-oncology

Co-culture with Immune Cells

Checkpoint Inhibitor Testing

Antibody-Dependent Cytotoxicity (ADCC)

## 8. Vaccine Development

Neoantigen Discovery

Antigen Presentation Studies

## BIOLOGICAL CHARACTERISTICS

|                              |                            |
|------------------------------|----------------------------|
| Alternate name 1             | CVCL_1799 Cells            |
| Alternate name 2             | TTA-1 Cells                |
| Tissue / origin              | Thyroid (Undifferentiated) |
| Cell growth type             | Adherent Cells             |
| Biosafety level              | BSL-2                      |
| Tumorigenicity / cell status | Tumor Cells                |

## CULTURE REQUIREMENTS

|                 |                                                 |
|-----------------|-------------------------------------------------|
| Culture medium  | DMEM + 10% FBS + 1% Pen/Strep                   |
| Freezing medium | 55% Complete Culture Medium + 40% FBS + 5% DMSO |

## RECEIPT AND CRYOPRESERVATION

Upon Receipt of Cells

1 mL cryovials are packed in dry ice for transportation. After receipt, clean the cryovial with 70% IPA to disinfect. Stored in a -80°C refrigerator overnight and then transfer to liquid nitrogen or revive them directly as per your use.

Note If the dry ice is found to have evaporated or the cryovial cap is detached/ damaged or the cells seems damaged, please contact us immediately.

## CULTURE AND RECOVERY INSTRUCTIONS

Recovery of Frozen Cells:

For Suspension Cell passaging, the following methods can be used as reference:

- 1) Shake the cryotube containing 1mL of cell suspension quickly within seconds in a 37°C water bath to thaw.
- 2) Add it to a centrifuge tube containing 4-6mL of complete medium and mix well. Centrifuge at 1000rpm for 3-5mins.
- 3) Discard the supernatant, and resuspend the cells in complete medium.
- 4) Then add the cell suspension to a culture flask (or dish) containing 6-8ml of complete medium and culture overnight at 37°C.
- 5) Observe the cell growth and cell density under a microscope the next day.
- 6) Cell subculture: If the cell density reaches 80%-90%, subculture can be performed.

For Adherent Cell passaging, the following methods can be used as reference:

- 1) Shake the cryotube containing 1mL of cell suspension quickly within seconds in a 37°C water bath to thaw.
- 2) Add it to a centrifuge tube containing 4-6mL of complete medium and mix well. Centrifuge at 1000rpm for 3-5mins.
- 3) Discard the supernatant, and rinse the cells 1-2 times with PBS without calcium and magnesium ions.
- 4) Add 0.25% (w/v) trypsin-0.53 mM EDTA to the culture flask (1-2 mL for T25 flask, 2-3 mL for T75 flask),
- 5) Place in a 37°C incubator for digestion for 1-2 minutes (difficult-to-digest cells can be properly prolonged for digestion time),
- 6) Observe the cell digestion under a microscope. If most of the cells become round and fall off, quickly take it back to the

operating table, tap the culture flask a few times, and add 3-4 ml of culture medium containing 10% FBS to terminate digestion.

7) Gently mix and aspirate, centrifuge at 1000rpm for 3-5min, discard the supernatant. Add 1-2mL culture medium and mix evenly.

8) Divide the cell suspension into new T25 bottles at a ratio of 1:2.

9) Add 6-8ml of new complete culture medium prepared according to the instructions to maintain cell growth vitality, and perform subsequent passages at a ratio of 1:2~1:5 as per actual conditions.

## CHARACTERIZATION AND QUALITY INFORMATION

|                              |                                                                                                                                                           |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sterility                    | Bacteria: Negative                                                                                                                                        |
|                              | Yeast: Negative                                                                                                                                           |
|                              | Mycoplasma: Negative                                                                                                                                      |
| Pathogen testing             | HIV: Negative                                                                                                                                             |
|                              | Hepatitis B: Negative                                                                                                                                     |
| Markers / assay readout      | Epithelial/tumor Phenotype panel: EpCAM/CD326+, E-cadherin/CD324 and pan-cytoKeratin (intracellular); CD44 variable; CD45-.                               |
| Assay / validation method    | Flow cytometry marker characterization                                                                                                                    |
| Authentication / QC evidence | Epithelial/tumor Phenotype panel: EpCAM/CD326+, E-cadherin/CD324 and pan-cytoKeratin (intracellular); CD44 variable; CD45-; Sterility: Bacteria: Negative |
|                              | Yeast: Negative                                                                                                                                           |
|                              | Mycoplasma: Negative; Pathogen testing: HIV: Negative Hepatitis B: Negative; Parental-line authentication: confirm applicability to this product          |

Catalogue confirmation note: Product-specific confirmation required: list only markers actually tested. Current text describes a suggested panel.

## HANDLING AND STORAGE

|              |                                                          |
|--------------|----------------------------------------------------------|
| Shelf life   | 12 months at time of shipping                            |
| Shipping     | Shipped on Dry Ice at -20°C                              |
| Storage      | Store at -176°C.                                         |
| Intended use | For Research Use Only. Not for diagnostics or human use. |

## PRODUCT DISCLAIMER

The data indicated herein are as indicated and validated in our laboratory. As these cell lines are of human origin, they carry a risk of latent human viruses (e.g., Epstein-Barr virus, hepatitis B). Therefore they should be handled accordingly with precaution. These reagents are for research use only and not for in-vitro diagnostics or human use.

## ADDITIONAL CLASSIFICATION

|                  |                   |
|------------------|-------------------|
| Product grouping | Cancer Cell Lines |
| Product subgroup | Human             |

Not a lot-specific certificate of analysis.