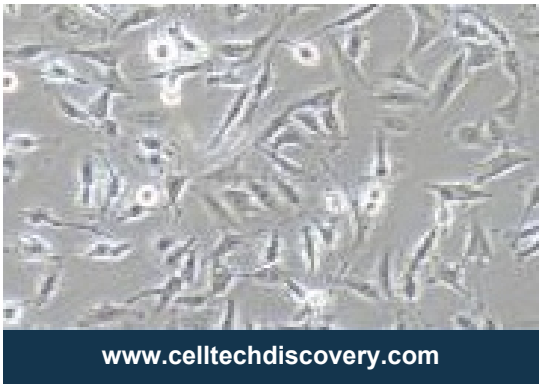
Human Astroglioma Cell Line, #U251 MG (KO)

Human Astroglioma Cell Line, #U251 MG (KO) is an established tumor-derived cell line for in vitro oncology research.
Engineered cellular models help researchers focus on selected targets or signaling processes.
They provide a setting for developing assays that relate experimental interventions to cellular responses.

CTDS SKU	CDS10219
Pack size	1 x 1 million cells
Product category	Engineered Cell Lines
Product subcategory	Other Engineered Cell Lines

PRODUCT IMAGE



PRODUCT BACKGROUND

Human Astroglioma Cell Line, #U251 MG (KO) 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	HTB-14 Cells
Alternate name 2	U251MG Cells
Tissue / origin	Astroglioma
Cell growth type	Adherent Cells
Biosafety level	BSL-2
Tumorigenicity / cell status	Tumor Cells
Target / construct	Stable human Astroglioma target-expressing cell line

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 ceryovial 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	CNS-tumor panel: CD56+, CD44+, EGFR variable, CD133 variable; CD45-. Add intracellular GFAP or βIII-tubulin according to lineage.
Assay / validation method	Flow cytometry marker characterization
Authentication / QC evidence	CNS-tumor panel: CD56+, CD44+, EGFR variable, CD133 variable; CD45-

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	Engineered Cell Lines
Product subgroup	Human

Not a lot-specific certificate of analysis.