TE10

305455

GENERAL INFORMATION

Description

The TE10 cell line is part of the TE-series, a collection of esophageal cancer models established in Japan, specifically from a well-differentiated squamous cell carcinoma of the esophagus. TE10 cells are notable for their epithelial morphology and growth in monolayer culture. These cells were derived from a primary lesion without prior radiation exposure, making them representative of untreated tumor biology.
TE10 exhibits several key genetic alterations linked to esophageal cancer progression. These include amplification and overexpression of the c-erbB gene, co-amplification of the int-2 and hst-1 proto-oncogenes, and dysregulation of growth factors such as TGF-α and EGF-R. These molecular features make TE10 a valuable model for investigating pathways involved in tumor growth, such as the epidermal growth factor receptor (EGFR) signaling axis. In addition, the line has been used to study responses to targeted therapies and chemotherapeutic agents, shedding light on mechanisms of drug resistance.
TE10 cells are also frequently used in invasion and migration assays due to their capacity to form colonies in soft agar and exhibit anchorage-independent growth. These characteristics highlight their utility in exploring the molecular drivers of metastasis. The cell line's consistent performance in experiments focused on tumor biology and pharmacology makes it an important tool for translational cancer research, particularly for developing therapeutic strategies aimed at squamous cell carcinoma of the esophagus.

Tissue	Esophagus
Disease	squamous cell carcinoma

Synonyms

- TE-10

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

Morphology	Epithelial-like
Cell type	Epithelial cell
Doubling time	30 hours

IDENTIFIERS

Citation

TE10 (Cytion catalog number 305455)

NCBI TaxID	9606
Cellosaurus	CVCL_1760

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EXPRESSION AND SUSCEPTIBILITY

Isoenzymes

LD, NP

Mutational profile

Mutation: TP53, Simple, p.Cys242Tyr (c.725G>A), Unspecified

HANDLING AND CULTURE

Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% FBS

Dissociation reagent	Accutase
Fluid renewal	1 to 2 times per week

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

QUALITY CONTROL AND CRYOPRESERVATION

Sterility

Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.
To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.

Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

Storage conditions

For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Shipping conditions

Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.

DONOR

Donor age	58 years

Ethnicity	Japanese

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes