Product sheet

CLS-354 | 300152

General information

Description	CLS-354 cells are a remarkable cell line cultivated in vitro since 1998. These cells originated from the primary squamous carcinoma of a 51-year-old Caucasian male, making them a valuable resource for researchers in biological science. CLS-354 cells were obtained from the oral cavity, specifically the mouth, providing a unique perspective for studying various aspects of oral cancer and related diseases. This cell line offers an opportunity to delve into the intricate mechanisms and characteristics of squamous cell carcinoma, a common cancer affecting the oral cavity. By utilizing CLS-354 cells, researchers can investigate the molecular pathways, genetic alterations, and phenotypic changes associated with squamous cell carcinoma. This cell line is a reliable model for studying the disease's progression, metastasis, and potential therapeutic interventions. Due to their establishment from a primary tumour, CLS-354 cells retain essential features and characteristics of squamous carcinoma, making them an invaluable tool for conducting experiments and investigations in vitro. Researchers can explore these cells' growth kinetics, cellular morphology, and behaviour to gain deeper insights into the pathology of squamous cell carcinoma. With a well-documented history dating back to their creation in 1998, CLS-354 cells have been extensively utilized in numerous studies and research projects. Their consistent and reproducible behaviour allows for accurate and reliable experimental results, contributing to advancing knowledge in oral cancer research. CLS-354 cells provide researchers with a powerful tool to investigate the intricacies of squamous cell carcinoma in the oral cavity. Their origin from a primary tumour and their long-established in vitro culture ensure they possess the critical characteristics required for insightful and reliable biological studies. With CLS-354 cells, researchers can further unravel the complexities of oral cancer and pave the way for novel therapeutic strategies and interventions.
Organism	Human
Tissue	Oral cavity
Disease	Squamous cell carcinoma
Synonyms	xF354, xF 354

Characteristics

Age	51 years
Gender	Male
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Monolayer, adherent

Identifiers / Biosafety / Citation

Citation	CLS-354 (Cytion catalog number 300152)
Biosafety level	1

Expression / Mutation

Tumorigenic	Yes, in nude mice
Reverse transcriptase	negative
Products	keratin

Handling

Culture Medium	DMEM
Medium supplements	10% FBS, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: 1.0 mM Sodium pyruvate
Passaging solution	Accutase
Subculturing	Remove medium and rinse the adherent cells using PBS without calcium and magnesium (3-5 ml PBS for T25, 5-10ml for T75 cell culture flasks). Add Accutase (1-2ml per T25, 2.5ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at ambient temperature for 10 minutes. Carefully resuspend the cells, the addition of medium is optional but not necessary, and dispense into new flasks which contain fresh medium.
Split ratio	A ratio of 1:2 to 1:4 is recommended
Seeding density	1 x 10^4 cells/cm^2 will yield in a confluent layer in about 6to7 days
Fluid renewal	Every 2 days
Freezing recovery	After thawing, plate the cells at 5 x 10^4 cells/cm^2 and allow the cells to recover from the freezing process and to adhere for at least 24 hours.
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)

Handling of cryopreserved cultures	The cells come deep-frozen shipped on dry ice. Please make sure that the vial is still frozen. If immediate culturing is not intended, the cryovial must be stored below -150 degree Celsius after arrival. If immediate culturing is intended, please follow the below instructions: Quickly thaw by rapid agitation in a 37 degree Celsius water bath within 40-60 seconds. The water bath should have clean water containing an antimicrobial agent. As soon as the sample has thawed, remove the cryovial from the water bath. A small ice clump should still remain and the vial should still be cold. From now on, all operations should be carried out under aseptic conditions. Transfer the cryovial to a sterile flow cabinet and wipe with 70% alcohol. Carefully open the vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of culture medium (room temperature). Resuspend the cells carefully. Centrifuge at 300 x g for 3 min and discard the supernatant. The centrifugation step may be omitted, but in this case the remains of the freeze medium have to be removed 24 hours later. Resuspend the cells carefully in 10 ml fresh cell culture medium and transfer them into two T25 cell culture flasks. All further steps are described in the subculture section.
Handling of proliferating cultures	One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in 1 or 2 x 50 ml centrifuge tubes, respectively. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Control the cell morphology and confluency under the microscope. Incubate at 37 degree Celsius for a minimum of 24 hours. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Incubate at 37 degree Celsius for a minimum of 24 hours.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contaminations are ruled out through PCR-based and luminescence-based mycoplasma assays. The absence of bacterial, fungal or yeast contamination is controlled through daily visual cell monitoring.
STR profile	**Amelogenin**: x,x **CSF1PO**: 10,12 **D13S317**: 9,13 **D16S539**: 9,11 **D5S818**: 9,12 **D7S820**: 7,9 **TH01**: 9,9.3 **TPOX**: 8 **vWA**: 15,17 **D3S1358**: 16 **D21S11**: 28 **D18S51**: 15 **Penta E**: 10,14 **Penta D**: 13 **D8S1179**: 12,14 **FGA**: 21,23 **D1S1656**: 12 **D6S1043**: 11 **D2S1338**: 25 **D12S391**: 17,21 **D19S433**: 15,15.2

HLA alleles	**A***: 01:01:01, 24:02:01 **B***: 08:01:01, 18:01:01 **C***: 07:01:01, 12:03:01 **DRB1***: 03:01:01, 11:03:01 **DQA1***: 05:01:01, 05:05:01 **DQB1***: 02:01:01, 03:01:01 **DPB1***: 01:01:01, 04:02:01 **E**: 01:01:01, 01:03