ChaGO-k-1

305759

INFORMAÇÕES GERAIS

Descrição

The ChaGo-K-1 cell line is a clonal derivative of the ChaGo human bronchogenic carcinoma line, which was originally established from a primary lung tumor. This subline was developed through single-cell cloning of the parent ChaGo population, specifically selected for its elevated secretion of the α-subunit of human chorionic gonadotropin (HCG-α), a placental glycoprotein hormone subunit that is not typically produced by lung epithelial cells. In detailed hormone profiling, ChaGo-K-1 was shown to secrete extremely high levels of free HCG-α (approximately 290 pmol/day/mg protein), while secreting negligible levels of intact HCG or the β-subunit. This indicates that the cell line ectopically expresses HCG-α in the absence of normal trophoblastic function, a feature characteristic of some tumors exhibiting hormonal dysregulation.
Cytogenetic analysis of ChaGo-K-1 revealed a hyperdiploid karyotype with a modal chromosome number between 51 and 54, indicating chromosomal instability, which is typical of many human cancer cell lines. Importantly, electron microscopy demonstrated no evidence of mycoplasma contamination or viral particles, supporting the cell line's integrity and suitability for research. The unique ability of ChaGo-K-1 to ectopically secrete HCG-α at levels exceeding even the eutopic secretion of intact HCG by placental tumor cells (e.g., JEG-3) suggests that the mechanisms regulating glycoprotein hormone subunit expression can be co-opted or dysregulated in non-placental malignancies. This property makes ChaGo-K-1 an important model for studying ectopic hormone production, oncogenic dedifferentiation, and tumor-associated glycoprotein signaling.

Tecido	Metastatic
Doença	Bronchogenic carcinoma

Aplicações

3D cell culture, Cancer research

Sinónimos

- CHAGO-K-1
- ChaGo K-1
- ChaGo-K1
- CHAGOK1
- ChaGoK1

CLASSIFICAÇÃO

Organismo	Humano
Sexo	Masculino
Propriedades de crescimento	Aderente
Nível de biossegurança	1

IDENTIFICADORES

Referência

ChaGO-k-1 (Cytion catalog number 305759)

Número de identificação fiscal do NCBI	9606
Cellosaurus	CVCL_1121

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EXPRESSÃO E SUSCETIBILIDADE

Expressão do antígeno

HCG; human chorionic gonadotropin (alpha subunit only); estradiol; progesterone; mucin (apomucin, MUC-1, MUC-2)

Isoenzimas

AK-1, 1,ES-D, 1,G6PD, B,GLO-I, 1-2,LDH, 5,Me-2, 0,PGM1, 1,PGM3, 1

Perfil mutacional

Mutation: ARID1A, Simple, c.1921-2A>G, Heterozygous, Note=Splice acceptor mutation (Cosmic-CLP=687596), ARID1A, Simple, p.His684Asp (c.2050C>G), Heterozygous (Cosmic-CLP=687596), RB1, Simple, p.Glu837Lys (c.2509G>A), Homozygous (Cosmic-CLP=687596), TP53, Simple, p.Cys275Phe (c.824G>T), Heterozygous (Cosmic-CLP=687596)

MANUSEAMENTO E CULTURA

Atmosfera de incubação	37°C, 5% CO_2, humidified atmosphere.
Renovação de fluidos	2 to 3 times per week

Descongelamento e cultura

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.

CONTROLO DE QUALIDADE E CRIOPRESERVAÇÃO

Esterilidade

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.

Meio de congelação	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.

Condições de armazenamento

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.

Condições de envio

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.

DOADOR

Idade do dador	45 years
Etnia	Caucasian

ASPECTOS LEGAIS E DE SEGURANÇA

Precauções de segurança

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.

Aviso legal

Our cells are provided for in vitro laboratory research purposes exclusively and are not intended for clinical or diagnostic use, nor are they to be administered to humans or used for veterinary purposes. Users must adhere to all applicable guidelines and regulations for the handling and use of these cells in a research setting.

Garantia

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.

É necessário um Acordo de Transferência de Material	Yes

DETALHES DO PRODUTO

Tabela de composição