CASP-1-1

305714

GENERAL INFORMATION

Description

The CASP-1-1 cell line is a genetically engineered mouse prostate epithelial cell model, part of the CASP series established from primary, androgen-dependent prostate tumors in mice. These cells were derived using tissue recombination methods involving the urogenital sinus mesenchyme (UGM), enabling the formation of prostatic ducts in vivo, thus confirming their epithelial identity. CASP-1-1 cells express epithelial markers such as E-cadherin and demonstrate tumorigenic potential through anchorage-independent growth in vitro and tumor formation upon orthotopic injection into mouse prostates. They are immortalized and stable in long-term culture, having been maintained for at least 30 passages.
Genetically, CASP-1-1 cells are characterized by a heterozygous Pten status (+/−) and show medium levels of activated Akt (p-Akt), reflecting functional PI3K/Akt signaling alterations common in prostate cancer models. The androgen receptor (AR) is both transcriptionally and translationally expressed in these cells, and sequencing has revealed no mutations in the AR coding region. However, despite expressing wild-type AR, CASP-1-1 is androgen-independent, meaning its proliferation is not reliant on exogenous androgens, and it does not exhibit androgen-responsive promoter activity under standard assay conditions. This makes CASP-1-1 particularly useful for studying the transition from androgen-dependent to androgen-independent prostate cancer and the role of Pten/PI3K/Akt and AR signaling in this progression.

Tissue	Prostate
Disease	Carcinoma

Applications

Cancer research

CLASSIFICATION

Organism	Mouse
Sex	Unspecified
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

Morphology	Epithelial
Cell type	Epithelial cell
Tumourigenic	Yes

IDENTIFIERS

Citation

CASP-1-1 (Cytion catalog number 305714)

NCBI TaxID	10090

EXPRESSION AND SUSCEPTIBILITY

Protein expression

AR, Pten

Cytion GmbH
Nikola-Tesla-Str. 3
69124 Heidelberg
Tel: +49 (0)6221 405780
info@cytion.com
cytion.com

Registered office Heidelberg
VAT ID: DE283292917
Local court Mannheim - HRB 714394
CEO / Geschäftsführer: Jonathan Steubing

Banking information
Sparkasse Heidelberg
IBAN: DE35 6725 0020 0009 2076 86
BIC: SOLADES1HDB

HANDLING AND CULTURE

Culture medium

DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)

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

Supplements

Supplement the medium with 10% FBS

Dissociation reagent	Accutase
Seeding density	1-3*10^4/cm²

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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
Follow the procedure described under Post-Thaw Recovery

QUALITY CONTROL AND CRYOPRESERVATION

Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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	Embryo

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

Cytion GmbH
Nikola-Tesla-Str. 3
69124 Heidelberg
Tel: +49 (0)6221 405780
info@cytion.com
cytion.com

Registered office Heidelberg
VAT ID: DE283292917
Local court Mannheim - HRB 714394
CEO / Geschäftsführer: Jonathan Steubing

Banking information
Sparkasse Heidelberg
IBAN: DE35 6725 0020 0009 2076 86
BIC: SOLADES1HDB