HBL-52

300188

GENERAL INFORMATION

Description

HBL-52 is a human cell line derived from a transitional meningioma grade I, specifically localized at the optic canal. This cell line originates from a female adult patient and exhibits epithelial-like morphology. Meningiomas are typically benign tumors that arise from the meninges, the membranous layers surrounding the brain and spinal cord. The transitional subtype represents a histological category where the tumor cells demonstrate a mixture of fibrous and meningothelial characteristics.
Recent studies have highlighted the responsiveness of HBL-52 cells to resveratrol, a naturally occurring polyphenol with significant anti-inflammatory and anticancer properties. Resveratrol has been found to inhibit proliferation in HBL-52 meningioma cells, suggesting a potential therapeutic role in managing or treating meningiomas, particularly those located in critical areas like the optic canal. This inhibition of cell proliferation highlights the utility of HBL-52 in pharmacological research and drug testing, providing a valuable model for assessing the efficacy of compounds that may influence tumor growth dynamics. Given its origin and benign nature, the HBL-52 cell line is a valuable model for studying meningioma pathogenesis, particularly in understanding the cellular behaviors and molecular mechanisms underlying the development and progression of meningiomas at unique anatomical sites like the optic canal.

Tissue	Brain
Disease	Meningioma, benign cells

Synonyms

- HBL 52

CLASSIFICATION

Organism	Human
Sex	Female
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

Morphology	Epithelial-like

IDENTIFIERS

Citation

HBL-52 (Cytion catalog number 300188)

NCBI TaxID	9606
Cellosaurus	CVCL_4220

EXPRESSION AND SUSCEPTIBILITY

Protein expression

DP (desmoplakin) +, PG (Plakoglobin) +, PP1 -, PP2 +, PP3 - (PP=Plakophilin), Dsc1 -, Dsc2 +, Dsc3 + (Dsc=Desmocollin), Dsg1 -, Dsg2 +, Dsg3 - (Dsg=Desmoglein), N-Cadherin +, PGP2 +.

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HANDLING AND CULTURE

Culture medium

McCoys 5a, w: 3.0 g/L Glucose, w: stable Glutamine, w: 2.0 mM Sodium pyruvate, w: 2.2 g/L NaHCO3 (Cytion article number 820200a)

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

Supplements

Supplement the medium with 10% FBS

Dissociation reagent	Accutase

Subculturing

Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium.

Seeding density	5 x 10^3 cells/cm^2 will yield in a confluent layer in about 4 days. Seeding densities of more than 9x 10^3 cells/cm^2 are not recommended
Fluid renewal	2 to 3 times per week
Post-thaw recovery	Allow the cells to adhere for at least 24 to 48 hours.

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 50% basal medium + 40% FBS + 10% DMSO, 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	47 years

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