**Product sheet**

# HBL-52 Cells | 300188

## General information

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| **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.<br><br>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. |
| **Organism** | Human |
| **Tissue** | Brain |
| **Disease** | Meningioma, benign cells |
| **Synonyms** | HBL 52 |

## Characteristics

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| **Age** | 47 years |
| **Gender** | Female |
| **Morphology** | Epithelial-like |
| **Growth properties** | Adherent |

## Regulatory Data

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| **Citation** | HBL-52 (Cytion catalog number 300188) |
| **Biosafety level** | 1 |

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| **NCBI_TaxID** | 9606 |
| **CellosaurusAccession** | CVCL_4220 |

## Biomolecular Data

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

## Handling

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| **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) |
| **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. |
| **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. |

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| **Thawing and Culturing Cells** | 1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.<br>2. 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.<br>3. 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.<br>4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.<br>5. 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.<br>6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.<br>7. 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.<br>8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes. |
| **Incubation Atmosphere** | 37°C, 5% $CO_2$, humidified atmosphere. |
| **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. |
| **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. |

## Quality Control & Molecular Analysis

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