Product sheet

HROG06 T0 M2 Cells | 300883

General information

Description	HROG06 T0 M2 is a primary human glioblastoma multiforme (GBM) cell line established from freshly resected tumor tissue of an adult patient diagnosed with WHO grade IV glioblastoma. The designation “T0” indicates that the tumor specimen was obtained at the initial surgical intervention, while “M2” refers to the second independently generated in vitro model derived from the same primary tumor. The cell line was developed within the HROG (Hansestadt Rostock Glioma) platform, which focuses on generating ultra-low passage glioma cultures that preserve the biological and molecular characteristics of the original patient tumor. HROG06 T0 M2 grows adherently under standardized culture conditions and exhibits a spindle-shaped, fibroblast-like morphology typical of primary GBM cultures. Immunophenotypic analyses across the HROG series demonstrate expression of neural and glial lineage markers such as glial fibrillary acidic protein (GFAP), nestin, and vimentin, supporting astrocytic tumor origin. Molecular characterization within the HROG platform includes assessment of clinically relevant biomarkers such as MGMT promoter methylation status, EGFR amplification, and mutational profiling of genes including TP53, IDH1/2, KRAS, and BRAF, confirming preservation of tumor-associated genomic alterations in early passage cultures. HROG06 T0 M2 has been used for in vitro evaluation of therapeutic responses to standard-of-care glioblastoma treatments, including alkylating chemotherapeutic agents, as well as targeted inhibitors. Comparative analyses within the HROG collection indicate stable morphology, reproducible growth kinetics, and consistent drug sensitivity profiles in early passages, supporting its suitability as a translational research model. As a patient-derived, low-passage GBM cell line, HROG06 T0 M2 provides a clinically relevant platform for studying glioblastoma biology, tumor heterogeneity, and mechanisms of treatment resistance.
Organism	Human
Tissue	Brain
Disease	Glioblastoma

Characteristics

Ethnicity	Caucasian
Growth properties	Adherent

Regulatory Data

Citation	HROG06 T0 M2 (Cytion catalog number 300883)
Biosafety level	1

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NCBI_TaxID	9606
CellosaurusAccession	CVCL_B7FP

Biomolecular Data

Handling

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)
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.
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.

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. 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. 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. 4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening. 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. 6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium. 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. 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. To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.