Product sheet

HROG17 T1 M1 Cells | 300875

General information

Description	HROG17 T1 M1 is a primary human glioblastoma multiforme (GBM) cell line established from a tumor specimen resected from an adult patient diagnosed with WHO grade IV glioblastoma. The designation “T1” indicates that the sample was obtained at the first surgical time point, while “M1” denotes the corresponding in vitro model derived from this tumor. The cell line was generated within the HROG (Hansestadt Rostock Glioma) platform, which focuses on establishing ultra-low passage glioma cultures that preserve patient-specific molecular and phenotypic characteristics. HROG17 T1 M1 grows adherently under standard culture conditions and exhibits a fibroblast-like morphology typical of primary GBM cultures. Immunophenotypic characterization of HROG-derived lines demonstrates expression of glial and neural lineage-associated markers such as glial fibrillary acidic protein (GFAP), nestin, and vimentin, consistent with high-grade astrocytic tumor origin. Molecular profiling within the HROG collection includes evaluation of clinically relevant parameters such as MGMT promoter methylation, EGFR amplification status, and mutational analysis of key genes including TP53, IDH1/2, KRAS, and BRAF, supporting retention of tumor-specific genomic alterations in culture. HROG17 T1 M1 has been used to assess sensitivity to standard-of-care agents for glioblastoma, including alkylating chemotherapeutics and additional targeted compounds. Comparative analyses across HROG models indicate that low-passage cultures maintain stable morphology, growth kinetics, and drug response profiles over early passages. As a patient-derived, low-passage glioblastoma model, HROG17 T1 M1 provides a clinically relevant in vitro platform for studying tumor biology, therapeutic response, and intertumoral heterogeneity in high-grade glioma.
Organism	Human
Tissue	Brain
Disease	Glioblastoma

Characteristics

Age	70 years
Gender	Male
Ethnicity	Caucasian
Growth properties	Adherent

Regulatory Data

HROG17 T1 M1 Cells | 300875

Citation	HROG17 T1 M1 (Cytion catalog number 300875)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_B7FQ

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	TrypLE Express, 37°C, 10 min,
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.

HROG17 T1 M1 Cells | 300875

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

HROG17 T1 M1 Cells | 300875

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.