Product sheet

GIMEN Cells | 300179

General information

Description	The GIMEN cell line is derived from the bone marrow metastasis of a young child diagnosed with stage IV neuroblastoma. These cells are classified as N-type, which typically indicates a neuroblastic phenotype characterized by high cell density, neuronal properties, and the capability for extensive neurite outgrowth in culture. The establishment of the GIMEN cell line provides a valuable model for studying the molecular and cellular mechanisms underlying aggressive forms of neuroblastoma, particularly those associated with metastatic dissemination. Functionally, GIMEN cells exhibit notable interactions with various cytokines and growth factors. Specifically, their growth is inhibited by interferon-gamma (IFN-gamma), a cytokine known for its antiproliferative effects on certain cancer cells. Furthermore, fibroblast growth factor-2 (FGF-2) demonstrates an antimitogenic effect on these cells, which can be reversed by the addition of IFN-gamma. This reversal suggests a complex interplay between these factors in modulating cell proliferation. Additionally, interleukin-1 beta (IL-1 beta) enhances the antimitogenic effects of FGF-2, indicating its potential role in the regulation of tumor growth dynamics in the neuroblastoma microenvironment. These interactions highlight the GIMEN cell line's utility in exploring the impact of cytokines and growth factors on neuroblastoma progression and response to therapy.
Organism	Human
Tissue	Brain
Disease	Neuroblastoma
Metastatic site	Bone marrow
Synonyms	Gi-ME-N, Gi-MEN, GI-ME-N, Gimen, Gimen1, Gaslini Institute-ME-Neuroblastoma

Characteristics

Age	3,5 years
Gender	Female
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Adherent

Regulatory Data

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Citation	GIMEN (Cytion catalog number 300179)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1232

Biomolecular Data

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
Doubling time	25 hours
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	2 to 3 x 10^4 cells/cm^2
Fluid renewal	2 to 3 times per week
Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, 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. 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

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.