Product sheet

Cytion

IGR-1 Cells | 300219

Renseignements généraux

Description	The IGR-1 cell line is derived from a human malignant melanoma, making it a valuable model for studying the pathophysiology of melanoma and testing anti-cancer therapies. These cells are epithelial in nature and exhibit characteristics typical of aggressive melanoma, including rapid proliferation and the ability to form colonies in soft agar, a hallmark of oncogenic transformation. The IGR-1 cell line is particularly useful in research focused on understanding the molecular mechanisms driving melanoma progression, as well as in the development and testing of targeted therapies and immunotherapies. IGR-1 cells harbor mutations common in melanoma, including alterations in the MAPK/ERK pathway, which is often dysregulated in this cancer type. These mutations contribute to the cell line's ability to proliferate uncontrollably and resist apoptosis. Researchers utilize IGR-1 cells to investigate the effects of various inhibitors on this signaling pathway, providing insights into potential therapeutic strategies. Additionally, the cell line's expression of melanoma-associated antigens makes it suitable for studying immune responses against melanoma, including the development of novel immunotherapeutic approaches.
Organism	Human
Tissue	Skin
Disease	Malignant melanoma
Metastatic site	Groin lymph node
Synonyms	IGR 1, IGR1, Institut Gustave Roussy-1

Caractéristiques

Age	42 years
Gender	Male
Morphology	Polygonal
Growth properties	Adherent

Données réglementaires

Citation	IGR-1 (Cytion catalog number 300219)
Biosafety level	1

NCBI_TaxID	9606
CellosaurusAccession	CVCL_1303

Données biomoléculaires

Tumorigenic	Yes, in nude mice.
Products	Melanin
Mutational profile	IGR-1 cells carry a heterozygous BRAFV600K mutation, but they are wild type with respect to BRAFV600E.

Manipulation

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
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	3 x $10^4/cm^2$ after thawing, 1 to 2 x $10^4/cm^2$ for routine splitting
Fluid renewal	2 to 3 times per week
Post-Thaw Recovery	1 to 2 days
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.

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.

Contrôle de la qualité et analyse moléculaire

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.