Product sheet

HMy2.CIR Cells | 305126

Renseignements généraux

Description	The HMy2.CIR cell line was developed through gamma irradiation and subsequent selection for the loss of HLA class I antigen expression from the HMy.2 B lymphoblastoid cell line. This parental cell line is a fast-growing mutant derived from the ARH-77 cell line. HMy2.CIR cells are particularly valuable as hosts for transfected class I major histocompatibility antigen genes, offering a versatile platform for studying antigen presentation and immune response mechanisms. The ARH-77 cell line, from which HMy2.CIR is ultimately derived, is known to be positive for Epstein-Barr nuclear antigen (EBNA+) and Epstein-Barr viral capsid antigen (EBVCA+). Consequently, the HMy2.CIR cell line is also presumed to be EBNA positive. This cell line is characterized by its expression of small amounts of HLA Cw4, but it does not express HLA A or B locus products. This unique antigen expression profile makes HMy2.CIR cells a useful model for immunological research, particularly in the study of HLA class I-restricted antigen processing and presentation.
Organism	Human
Tissue	B-Lymphoblast
Synonyms	Hmy.2 CIR, HMy2.CIR, C1R

Caractéristiques

Age	33 years
Gender	Female
Ethnicity	Caucasian
Morphology	Lymphoblast
Growth properties	Suspension

Données réglementaires

Citation	HMy2.CIR (Cytion catalog number 305126)
Biosafety level	2
NCBI_TaxID	9606

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CellosaurusAccession	CVCL_3714

Données biomoléculaires

Manipulation

Culture Medium	IMDM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 25 mM HEPES, w: 1.0 mM Sodium pyruvate, w: 3.024 g/L NaHCO3 (Cytion article number 820800a)
Supplements	Supplement the medium with 10% FBS
Subculturing	Gently homogenize the cell suspension in the flask by pipetting up and down, then take a representative sample to determine the cell density per ml. Dilute the suspension to achieve a cell concentration of 1 x 10^5 cells/ml with fresh culture medium, and aliquot the adjusted suspension into new flasks for further cultivation.
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.

Contrôle de la qualité et analyse moléculaire

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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.