Product sheet

ARH-77 Cells | 300306

Renseignements généraux

Description	The ARH-77 cell line is a human cell line derived from the peripheral blood of a 33-year-old female patient with plasma cell leukemia, a type of cancer that affects plasma cells in the bone marrow. ARH-77 cells are characterized by their B lymphoblastoid phenotype, which makes them particularly useful for studying B-cell maturation and function as well as plasma cell leukemia pathology. This cell line is also frequently used in research related to Epstein-Barr virus (EBV), as it is EBV-transformed.
Organism	Human
Tissue	Blood
Disease	Plasma Cell Leukemia
Applications	3D cell culture, Immune system disorder research, Immunology
Synonyms	ARH 77, ARH77

Caractéristiques

Age	33 years
Gender	Female
Ethnicity	European
Morphology	Lymphoblast
Cell type	B lymphoblast
Growth properties	Suspension

Données réglementaires

Citation	ARH-77 (Cytion catalog number 300306)
Biosafety level	2
NCBI_TaxID	9606

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CellosaurusAccession	CVCL_1072

Données biomoléculaires

Antigen expression	CD11a +, CD19 +, CD20 +, CD28 +, CD38 -, CD49e, +CD3 -, CD10 -, CD13 -, CD19 +, CD20 +, CD34 -, CD37 +, CD71 +, cyCD79 +, CD80 +, CD138 -, HLA-DR +, sm/cyIgG +, sm/cyIgM -, sm/cykappa +, sm/cylambda -
Viruses	EBV + (transformant), HBV -, HCV -, HIV-1 -, HIV-2 -, HTLV-1/2 -, MLV -, SMRV
Karyotype	Human near diploid karyotype with 8% polyploidy - 46(44-48)2n>xx, +9, del(1)(q23), add(2)(q21), add(3)(p11), der(3)t(2,3)(q23,q26), del(6)(p21), der(9)t(9,17)(q10,q10) - sideline with der(x)t(x,1)(q23,p32), del(16)(p13.2) and unresolved der(3) and der(9)hsr markers - no IGH translocations detected

Manipulation

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 10% heat-inactivated 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.
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.