

REH Cells | 300320

General information

Description

REH is a human B-cell precursor acute lymphoblastic leukemia (ALL) cell line derived in 1973 from the peripheral blood of a 15-year-old patient during relapse. As one of the earliest established B-precursor ALL models, it displays typical lymphoblastic morphology and grows in suspension culture, reflecting the behavior of leukemia blasts.

REH cells are widely used to investigate B-ALL biology, including proliferation, survival pathways, and treatment response. They support both in vitro drug-screening studies and in vivo leukemia modeling through xenograft experiments in immunodeficient mice, making them a versatile tool for preclinical research on novel therapeutic strategies.

Organism

Human

Tissue

Peripheral blood

Disease

Acute lymphoblastic leukemia (ALL)

Synonyms

Reh

Characteristics

Age

15 years

Gender

Female

Ethnicity

Caucasian

Morphology

Round cells

Cell type

Lymphoblast

Growth properties

Adherent

Regulatory Data

Citation

REH (Cytion catalog number 300320)

Biosafety level

1

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NCBI_TaxID	9606
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CellosaurusAccession	CVCL_1650
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Biomolecular Data

Antigen expression	CD3 A (17%) B (17%) C (20%), CD4 (15%), CD10 (55%), CD20+, HLA-DR+, CALLA+
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Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO ₃ (Cytion article number 820700a)
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Supplements	Supplement the medium with 10% heat-inactivated FBS
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Dissociation Reagent	Accutase
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Subculturing	Maintain cultures by periodically adding or replacing the medium. Initiate cultures with a density of 5×10^5 cells/ml and keep the cell concentration within the range of 3×10^5 to 1×10^6 cells/ml for optimal growth.
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Fluid renewal	2 to 3 times per week
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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 $300 \times g$ 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

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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.