

OKT11 Cells | 300500

General information

Description

The OKT 11 monoclonal antibody is produced by a hybridoma formed through the fusion of spleen cells from immunized mice and mouse myeloma cells (P3X63Ag8U1). Specifically, the spleen cells were taken from mice immunized with leukemic cells from a patient with T-cell acute lymphoblastic leukemia (T-ALL). This hybridoma, designated as OKT 11.

The OKT 11 antibody selectively binds to an antigen found on nearly all normal human peripheral T cells and approximately 95% of normal human thymocytes but does not react with B cells or null cells. It plays a crucial role in diagnosing and treating diseases related to T cell abnormalities, such as autoimmune disorders and certain leukemias.

Organism Mouse

Tissue Hybridoma

Disease Leukemia

Synonyms OKT11

Characteristics

Breed/Subspecies CAF1 x P3x63Ag8U

Morphology Lymphoblast

Cell type Hybridoma (Spleen, B cell)

Growth properties Suspension

Regulatory Data

Citation OKT 11 (Cytion catalog number 300500)

Biosafety level 1

NCBI_TaxID 10090

CellosaurusAccession CVCL_2664

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Biomolecular Data

Protein expression Immunoglobulin, monoclonal antibody, against human T cell (human T lymphocyte) and human E rosette positive thymocytes (human thymic lymphocyte), against CD2

Handling

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 1×10^5 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.

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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.