Farage

305071

GENERAL INFORMATION

Description

The Farage cell line originates from a B lymphocyte derived from an adult female diagnosed with non-Hodgkin's B-cell lymphoma. This cell line is particularly valuable in immunological studies due to its unique characteristics and reactions to various stimuli. Farage cells grow in suspension and are notable for not expressing surface or cytoplasmic immunoglobulins, highlighting their utility in studies focused on immune response without the interference of these proteins.
When treated with interleukin-4 (IL-4), Farage cells exhibit an increase in the expression of several markers including CD23, CD54, and CD58, while showing a reduction in CD21, CD22, and CD38 levels. This modulation of surface markers suggests IL-4's role in influencing B-cell behavior and provides a useful model for exploring the signaling pathways and regulatory mechanisms in B-cells. Moreover, the response to phorbol 12-myristate 13-acetate (PMA) treatment, which results in the down-regulation of CD21 and CD23, further supports its application in studying kinase-driven signaling in B-cells.
The absence of terminal deoxynucleotidyl transferase (TdT) and recombination activating genes (RAG-1 and RAG-2) in Farage cells confirms their classification as mature B-cells rather than pre-B cells. This aspect is crucial for research targeting the mature stages of B-cell development or function. Additionally, the presence of Epstein-Barr virus (EBV) in these cells can be leveraged in studies investigating viral interactions with host cellular mechanisms, particularly in the context of oncogenic processes in lymphocytes.

Tissue	Lymphatic system
Disease	Diffuse large B-cell lymphoma germinal center B-cell type
Metastatic site	Lymph node

Synonyms

- FARAGE
- Farage OL
- Farage Original Line

CLASSIFICATION

Organism	Human
Sex	Female
Growth properties	Suspension
Biosafety level	2

CHARACTERISTICS

Morphology	Lymphoblast
Doubling time	48 hours

IDENTIFIERS

Citation

Farage (Cytion catalog number 305071)

NCBI TaxID	9606
Cellosaurus	CVCL_3302

HANDLING AND CULTURE

Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% heat-inactivated FBS, add 2.5 g/L glucose and 10 mM HEPES

Subculturing

Can be cultivated to 1.5-2 x 10^6 cells/ml. 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 5 x 10^5 cells/ml with fresh culture medium, and aliquot the adjusted suspension into new flasks for further cultivation.

Seeding density	5 x 10^5 cells/ml
Fluid renewal	2 to 3 times per week

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
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.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

QUALITY CONTROL AND CRYOPRESERVATION

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.

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.

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.

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.

DONOR

Donor age	70 years
Ethnicity	European

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes

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