Product sheet

Farage Cells | 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.
Organism	Human
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

Characteristics

Age	70 years
Gender	Female
Ethnicity	European
Morphology	Lymphoblast
Growth properties	Suspension

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Identifiers / Biosafety / Citation

Citation	Farage (Cytion catalog number 305071)
Biosafety level	2

Expression / Mutation

Handling

Culture Medium	RPMI 1640, w: 4.5 g/L Glucose, w: 2 mM L-Glutamine, w: 10 mM HEPES, w: 1 mM Sodium pyruvate, w: 1.5 g/L NaHCO3 (Cytion article number 820702a)
Medium supplements	Supplement the medium with 10% heat-inactivated FBS
Doubling time	48 hours
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.
Split ratio	1:2 to 1:5
Seeding density	5 x 10^5 cells/ml
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100)

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Handling of cryopreserved cultures

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.

Quality control / Genetic profile / HLA

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.