Product sheet

Immortalized HK/FDC Cells | 300205

General information

Description	The immortalized HK/FDC cell line is a genetically stabilized derivative of the original HK follicular dendritic cell-like cells, retaining key phenotypic and functional characteristics while enabling extended propagation without the senescence-associated limitations of the parental culture. Immortalization was achieved through the introduction of defined genetic elements that bypass replicative arrest, facilitating consistent long-term studies of germinal center biology and FDC-B cell interactions. Immortalized HK/FDC cells maintain the capacity to bind and co-stimulate germinal center B cells, promote their survival, and enhance their proliferation in the presence of signals such as anti-IgM or CD40 ligation. Importantly, they continue to express adhesion molecules and costimulatory factors characteristic of FDCs, including VCAM-1 and ICAM-1, and secrete soluble mediators that mimic the microenvironmental support provided by native FDCs. These properties make the immortalized HK/FDC line a robust and reproducible model for dissecting the cellular and molecular mechanisms governing B cell maturation, affinity selection, and survival within the germinal center.
Organism	Human
Tissue	Tonsil
Disease	Follicular dendritic reticulum
Applications	Feeder cell for growth of normal B lymphocytes and lymphomas/leukemias. Studies on B cell development in germinal centers of lymph nodes. Possibly research on virus infection of FDCs

Characteristics

Age	Child
Gender	Unspecified
Ethnicity	Caucasian
Morphology	Fibroidal
Cell type	Follicular dendritic cell
Growth properties	Adherent

Regulatory Data

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Citation	Immortalized HK/FDC (Cytion catalog number 300205)
Biosafety level	1
NCBI_TaxID	9606

Biomolecular Data

Viruses	Cytion, immortalized by Inscreenex i.A.

Handling

Culture Medium	DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
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 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.
Flask Coating	None
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.