Product sheet

Ishikawa Cells | 305262

General information

Description	**Disclaimer: The identity matching score for this sample is 79.3%, which falls below 80%, likely due to genetic changes caused by microsatellite instability, a known characteristic of this cell line.** The Ishikawa cell line is a well-established model derived from endometrial adenocarcinoma of a human adult. These cells are widely used in gynecological cancer research, particularly for studying the biology and treatment of endometrial cancer. Ishikawa cells retain many of the functional characteristics of normal endometrial epithelial cells, including the expression of hormone receptors such as estrogen and progesterone receptors. This makes them a valuable tool for investigating the hormonal regulation of endometrial cancer growth and the effects of hormonal therapies on cancer cells. Ishikawa cells exhibit an epithelial morphology and are known for their ability to form glandular structures in culture, which is indicative of their differentiated state. They are responsive to hormonal stimuli, allowing researchers to study the molecular mechanisms of hormone action in the endometrium and the impact of endocrine disruptors. Additionally, Ishikawa cells are used in toxicological studies to assess the effects of various compounds on endometrial cell proliferation and differentiation. Their role in preclinical testing of chemotherapeutic agents and hormonal treatments further underscores their importance in the development of therapeutic strategies for endometrial cancer.
Organism	Human
Tissue	Endometrium
Disease	Endometrial adenocarcinoma
Metastatic site	Primary tumor site (endometrium)
Applications	Endometrial cancer research; hormonal regulation of endometrial proliferation; estrogen/progesterone receptor signalling; gynecological oncology; preclinical drug testing; endocrine disruptor screening; toxicological studies
Synonyms	ISHIKAWA, ISHI

Characteristics

Age	39 years
Gender	Female
Ethnicity	Japanese
Morphology	Epithelial-like

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Cell type	Epithelial cells
Growth properties	Adherent

Regulatory Data

Citation	Ishikawa (Cytion catalog number 305262)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_2529
GMO Status	No genetic modification; wildtype endometrial adenocarcinoma cell line with MSI-associated identity drift

Biomolecular Data

Receptors expressed	Oestrogen, progesterone

Handling

Culture Medium	EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)
Supplements	Supplement the medium with 10% FBS and 1% NEAA
Dissociation Reagent	Accutase
Subculturing	Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium.
Split ratio	1 to 3

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Fluid renewal	2 to 3 times per week
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.

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.
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

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.