Product sheet

EO771 Cells | 305352

General information

Description	EO771 is a murine mammary cancer cell line derived from spontaneous tumors in C57BL/6 mice. This line serves as an important preclinical model for studying breast cancer in an immunocompetent setting, due to its compatibility with syngeneic C57BL/6 mouse models. These models facilitate the exploration of interactions between tumor cells and the immune system, providing insights into tumor growth and metastasis. EO771 cells are classified as luminal B subtype, characterized by being estrogen receptor alpha (ERα) negative, estrogen receptor beta (ERβ) positive, progesterone receptor positive, and ErbB2 (HER2) positive. This classification aligns with luminal B tumors found in humans, which often have poorer prognoses compared to luminal A types. EO771's luminal B status makes it relevant for investigating hormonal therapy responses; studies have shown the cell line's sensitivity to anti-estrogen treatments such as tamoxifen and other selective estrogen receptor modulators. In addition to its phenotypic traits, EO771 has proven useful for studies on tumor metastasis and immune response modulation. Its metastatic behavior mirrors that of human breast cancer, with frequent dissemination to the lungs and other sites, such as the peritoneum and brain. These attributes make EO771 a valuable model for evaluating the efficacy of novel anticancer treatments and understanding tumor-immune system dynamics.
Organism	Mouse
Tissue	Mammary gland
Disease	Malignant neoplasm
Synonyms	Eo771, E0771, EO 771

Characteristics

Breed/Subspecies	C57BL/6
Gender	Female
Morphology	Epithelial-like
Growth properties	Adherent

Regulatory Data

Citation	EO771 (Cytion catalog number 305352)

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Biosafety level	1
NCBI_TaxID	10090
CellosaurusAccession	CVCL_GR23

Biomolecular Data

Receptors expressed	ERalpha-, ERbeta+, PR+ and ErbB2+

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Supplements	Supplement the medium with 10% FBS, 20 mM HEPES
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.
Seeding density	Maintain cultures between 5 - 10 x 10^4 cells/cm^2
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

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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.