Product sheet

MDA-MB-435S Cells | 300277

General information

Description	**Disclaimer: The cell line in question has been identified as problematic due to contamination issues. Specifically, the parent cell line (MDA-MB-435) has been shown to be a derivative of the M14 cell line.** The MDA-MB-435S cell line is a widely utilized model in cancer research, originally thought to be derived from a breast cancer metastasis. These cells exhibit characteristics typical of highly aggressive cancer cells, including a rapid proliferation rate, resistance to apoptosis, and the ability to invade surrounding tissues. Due to these traits, MDA-MB-435S cells are frequently used in studies investigating cancer metastasis, drug resistance mechanisms, and the molecular underpinnings of aggressive tumor behavior. Interestingly, subsequent molecular and genetic analyses have revealed that MDA-MB-435S cells share a closer genetic profile with melanoma rather than breast cancer, raising significant implications for their use in research. Despite this controversy, they remain a valuable model for studying metastatic processes and testing potential therapeutic agents, particularly those targeting mechanisms common to both breast cancer and melanoma. Researchers are advised to consider these genetic findings when interpreting results obtained from studies involving MDA-MB-435S cells.
Organism	Human
Tissue	Skin
Disease	Amelanotic melanoma
Metastatic site	Right buttock, hypodermis (primary melanoma/M14 origin)
Applications	Metastasis and invasion research; melanoma/breast cancer controversy model; drug resistance mechanisms; tumor biology; preclinical pharmacological screening
Synonyms	MDA-MB-435s, MDA-MB-435 S, MDA-MB-435-S, MDAMB435S, BrCL15

Characteristics

Age	33 years
Gender	Male
Ethnicity	European
Morphology	Epithelial-like
Cell type	Epithelial cells

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Growth properties	Adherent

Regulatory Data

Citation	MDA-MB-435S (Cytion catalog number 300277)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0622
GMO Status	No genetic modification; problematic line — parental MDA-MB-435 identified as M14 melanoma derivative; use with appropriate caution and cite genetic identity

Biomolecular Data

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 5% FBS
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 5
Seeding density	1 to 3 × 10^4 cells/cm^2
Fluid renewal	2 to 3 times per week

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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.