**Product sheet**

# MDA-MB-361 Cells | 305267

## General information

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| **Description** | The MDA-MB-361 cell line is derived from a metastatic site of breast adenocarcinoma in a human adult. This cell line is utilized extensively in breast cancer research, particularly in studies investigating the molecular mechanisms of cancer metastasis, hormone receptor signaling, and therapeutic responses. MDA-MB-361 cells are estrogen receptor-positive (ER+) and HER2-positive, making them a valuable model for studying the interplay between these receptors in breast cancer progression and treatment.<br><br>MDA-MB-361 cells exhibit an epithelial morphology and are known for their ability to form colonies in soft agar, indicative of their tumorigenic potential. They express key markers associated with breast cancer, including estrogen receptor (ER), progesterone receptor (PR), and human epidermal growth factor receptor 2 (HER2/neu). These cells are frequently used to evaluate the efficacy of hormonal therapies, targeted treatments, and chemotherapeutic agents in preclinical studies. Additionally, MDA-MB-361 cells serve as a model to study the mechanisms of resistance to HER2-targeted therapies and to develop strategies to overcome such resistance. Their relevance in breast cancer research underscores their importance in advancing our understanding of cancer biology and improving therapeutic approaches for breast cancer patients. |
| **Organism** | Human |
| **Tissue** | Breast, mammary gland |
| **Disease** | Adenocarcinoma |
| **Metastatic site** | Brain |
| **Synonyms** | MDA-MB 361, MDA MB 361, MDA-MB361, MDAMB361, MDA-361, MDA361, MB361, MD Anderson-Metastatic Breast-361 |

## Characteristics

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| **Age** | 40 years |
| **Gender** | Female |
| **Ethnicity** | European |
| **Morphology** | Epithelial |
| **Growth properties** | Loosely adherent |

## Regulatory Data

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| **Citation** | MDA-MB-361 (Cytion catalog number 305267) |
| **Biosafety level** | 1 |
| **NCBI_TaxID** | 9606 |
| **CellosaurusAccession** | CVCL_0620 |

## Biomolecular Data

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| **Oncogenes** | Wnt7h+ |

## Handling

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| **Culture Medium** | DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 1.6 mM L-Glutamine, w: 15 mM HEPES, w: 1.0 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion 820400a) |
| **Supplements** | Supplement the medium with 20% FBS, 5 µg/mL insulin |
| **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. |
| **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. |

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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.<br>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.<br>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.<br>4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.<br>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.<br>6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.<br>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.<br>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.<br><br>To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections. |