**Product sheet**

# WM-115 Cells | 305457

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| **Description** | WM-115 is a human melanoma cell line derived from the primary tumor of an adult patient with cutaneous malignant melanoma. The cell line was established from a vertical growth phase (VGP) primary lesion and is part of a well-characterized series of melanoma models generated to represent distinct stages of melanoma progression. WM-115 cells grow adherently in vitro and display an epithelioid to spindle-shaped morphology typical of malignant melanocytes. Cytogenetic analyses of related primary and metastatic pairs have demonstrated non-random chromosomal abnormalities, particularly involving chromosomes 1, 6, and 7, supporting clonal evolution during melanoma progression.<br><br>Phenotypically, WM-115 expresses melanocytic lineage markers and melanoma-associated antigens, including pigmentation-related proteins and cell surface adhesion molecules. Compared to non-invasive radial growth phase lesions, vertical growth phase melanoma cells such as WM-115 exhibit increased expression of adhesion-related molecules, including integrins and extracellular matrix-associated proteins, reflecting enhanced invasive potential. Melanoma cells commonly express receptors for growth factors such as IGF-I and, variably, EGF receptor family members, supporting autocrine and paracrine growth stimulation mechanisms.<br><br>Functionally, WM-115 represents a model of primary melanoma with metastatic competence emerging at the vertical growth phase stage. Unlike normal melanocytes, which require multiple exogenous mitogens for proliferation, primary melanoma cells such as WM-115 display reduced dependence on external growth factors and may proliferate under more permissive culture conditions. As a primary tumor-derived melanoma model, WM-115 is widely used to study melanoma progression, invasion-associated phenotypes, growth factor signaling, and therapeutic response in comparison with metastatic counterparts derived from the same or related patients. |
| **Organism** | Human |
| **Tissue** | Metastatic |
| **Disease** | Melanoma |
| **Metastatic site** | Right anterior leg, skin |
| **Synonyms** | WM-115, WM 115, WM115F, WM115-mel, WM115mel, WC00079 |

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| **Age** | 55 years |
| **Gender** | Female |
| **Ethnicity** | Caucasian |

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| **Growth properties** | Adherent |

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| **Citation** | WM115 (Cytion catalog number 305457) |
| **Biosafety level** | 1 |
| **NCBI_TaxID** | 9606 |
| **CellosaurusAccession** | CVCL_0040 |

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| **Mutational profile** | Mutation: p.Val600Asp, Heterozygous |

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| **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% heat-inactivated FBS and 1% NEAA |
| **Dissociation Reagent** | Accutase |
| **Seeding density** | 1 to 3 x $10^4$ cells/$cm^2$ |
| **Freeze medium** | As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability. |

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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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.<br>7. Follow the procedure described under Post-Thaw Recovery |
| **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. |