WM115

305457

GENERAL INFORMATION

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. 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.
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.

Tissue	Metastatic
Disease	Melanoma
Metastatic site	Right anterior leg, skin

Synonyms

- WM-115
- WM 115
- WM115F
- WM115-mel
- WM115mel
- WC00079

CLASSIFICATION

Organism	Human
Sex	Female
Growth properties	Adherent
Biosafety level	1

IDENTIFIERS

Citation

WM115 (Cytion catalog number 305457)

NCBI TaxID	9606
Cellosaurus	CVCL_0040

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EXPRESSION AND SUSCEPTIBILITY

Mutational profile

Mutation: p.Val600Asp, Heterozygous

HANDLING AND CULTURE

Culture medium

EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

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

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
Follow the procedure described under Post-Thaw Recovery

QUALITY CONTROL AND CRYOPRESERVATION

Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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.

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.

DONOR

Donor age	55 years
Ethnicity	Caucasian

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes

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