Data Sheet

SK-MEL-37 Human Melanoma Cell Line

Tumor Cell Line

SCC262

Pack Size ≥1x10^6 viable cells/vial

Store at: Liquid nitrogen

FOR RESEARCH USE ONLY

Not for use in diagnostic procedures. Not for Human or Animal Consumption.

Background

Malignant melanoma is the most aggressive type of skin cancer, and the fifth most common cancer in the United States.[1] As survival rate depends on the stage of disease at time of diagnosis, early detection is crucial to improving disease outcome and saving lives. Amelanotic (or hypomelanotic) melanoma (AM) is a rare subtype of cutaneous melanoma, comprising between 2-8% of total cases.[2] AM is characterized by decreased or null presence of melanin, due to loss of pigment in tumor evolution. AM is usually diagnosed at more advanced stages, resulting in lower overall survival. AM is frequently observed in patients with melanocortin 1 receptor gene (MC1R) genotypes linked to certain phenotypes such as red hair.[2]

The SK-MEL-37 amelanotic cutaneous melanoma cell line is a well-established model for human melanoma, widely utilized in investigations into the mutational landscape of melanoma and the enhanced antigen expression that occurs concomitantly with melanoma progression. SK-MEL-37 expresses the melanoma-associated antigens MAGE-A1, tyrosinase, and p97, and cell surface antigens essential for metastasis such as CD71 and CD146.[3] SK-MEL-37 is valuable and highly characterized cell system for transformation of melanocytes into melanoma and identification of therapeutic targets for this disease.

Source

SK-MEL-37 was established from a metastatic lymph node of a 65-year-old male patient with malignant melanoma of rectal tumor origin.[4]

Short Tandem Repeat

D3S1358: 16	D18S51: 12, 16	TPOX: 8, 11
D7S820: 9	D5S818: 11	CSF1PO: 12
vWA: 16	D13S317: 8, 11	Amel: X
FGA: 19, 23	D16S539: 12, 14	Penta D: 9, 13
D8S1179: 12, 15	TH01: 6, 7	Penta E: 7, 12
D21S11: 28, 30		

Cancer cell lines are inherently genetically unstable. Instability may arise in the form of loss of heterozygosity of alleles at one or more genetic sites with increased passages. SK-MEL-37 is derived from a male patient; however, the Y chromosome may have been lost in culture.

Quality Control Testing

- Each vial contains ≥ $1x10^6$ viable cells.
- Cells are tested negative for infectious diseases by a Human Essential CLEAR panel by Charles River Animal Diagnostic Services.
- Cells are verified to be of human origin and negative for inter-species contamination from mouse, rat, Chinese hamster, Golden Syrian hamster, and Non-human Primate (NHP) as assessed by a Contamination Clear panel by Charles River Animal Diagnostic Services.
- Cells are negative for mycoplasma contamination.

Storage and Handling

SK-MEL-37 cells should be stored in liquid nitrogen. The cells can be cultured for at least 10 passages after initial thawing without significantly affecting functionality.

Representative Data

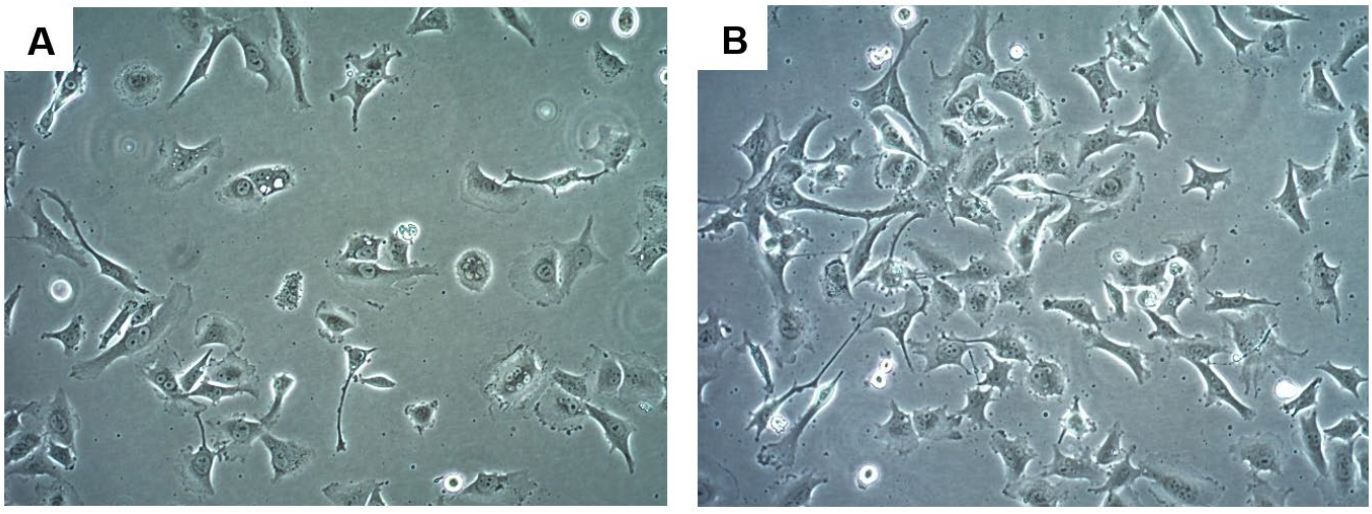

Figure 1. Bright-field images of SK-MEL-37 cells in culture, one (A) and two (B) days after thaw in a T175 flask.

Protocols

Thawing Cells

SK-MEL-37 cells are relatively large, resulting in relatively low cell yield. For expansion purposes, we recommend thawing cells into a T175 flask.

1. Do not thaw the cells until the recommended medium is on hand. Cells can grow on normal tissue cultureware surfaces without any additional coating.

   Cells are thawed and expanded in SK-MEL-37 Expansion Medium comprised of RPMI 1640 (Cat. No. R8758) with 1X non-essential amino acids (Cat. No. TMS-001-C), 2 mM L-Glutamine (Cat. No. TMS-002-C) and 10% FBS (Cat. No. ES-009-B).
2. Remove the vial of frozen SK-MEL-37 cells from liquid nitrogen and incubate in a 37 °C water bath. Closely monitor until the cells are completely thawed. Maximum cell viability is dependent on the rapid and complete thawing of frozen cells.

   IMPORTANT: Do not vortex the cells.
3. As soon as the cells are completely thawed, disinfect the outside of the vial with 70% ethanol. Proceed immediately to the next step.
4. In a laminar flow hood, use a 1- or 2-mL pipette to transfer the cells to a sterile 50 mL conical tube. Be careful not to introduce any bubbles during the transfer process.
5. Using a 10 mL pipette, slowly add dropwise 9 mL of SK-MEL-37 Expansion Medium (Step 1 above) to the 15 mL conical tube.

   IMPORTANT: Do not add the entire volume of media all at once to the cells. This may result in decreased cell viability due to osmotic shock.
6. Gently mix the cell suspension by slowly pipetting up and down twice. Be careful not to introduce any bubbles.

   IMPORTANT: Do not vortex the cells.
7. Centrifuge the tube at 300 *x g* for 2-3 minutes to pellet the cells.
8. Decant as much of the supernatant as possible. Steps 5-8 are necessary to remove residual cryopreservative (DMSO).
9. Resuspend the cells in 35 mL of SK-MEL-37 Expansion Medium.
10. Transfer the cell mixture to a T175 tissue culture flask.
11. Incubate the cells at 37 °C in a humidified incubator with 5% CO_2.

Subculturing Cells

1. SK-MEL-37 cells should be passaged at ~80-85% confluency. Do not allow the cells to grow over 85% confluency.
2. Carefully remove the medium from the T175 tissue culture flask containing the 80% confluent layer of SK-MEL-37.
3. Rinse the flask with 25 mL 1X PBS. Aspirate after the rinse.
4. Apply 10 mL of Accutase™ and incubate in a 37 °C incubator for 3-5 minutes.
5. Inspect the flask and ensure the complete detachment of cells by gently tapping the side of the flask with the palm of your hand.
6. Add 10-15 mL of SK-MEL-37 Expansion Medium to the plate.
7. Gently rotate the flask to mix the cell suspension. Transfer the dissociated cells to a 50 mL conical tube.
8. Centrifuge the tube at 300 *x g* for 3-5 minutes to pellet the cells.
9. Discard the supernatant, then loosen the cell pellet by tapping the tip of the tube with a finger.
10. Apply 2-5 mL of SK-MEL-37 Expansion Medium to the conical tube and resuspend the cells thoroughly.

    IMPORTANT: Do not vortex the cells.
11. Count the number of cells using a hemocytometer.
12. Plate the cells to the desired density. Typical split ratio is 1:6.

Cryopreservation of Cells

SK-MEL-37 cells may be frozen in SK-MEL-37 Expansion Medium and 10% DMSO using a Nalgene® slow freeze Mr. Frosty® container.

References

1. CA Cancer J Clin 2019, 69(1): 7-34.
2. Cancers (Basel) 2020, 12(9): 2362.
3. J Cancer 2013, 45(5): 371-382.
4. J Exp Med 1976, 144(4): 873-881.

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