SKOV-3/Luc Cell Line

CATALOG NUMBER: AKR-232

STORAGE: Liquid nitrogen

Note: For best results begin culture of cells immediately upon receipt. If this is not possible, store at -80°C until first culture. Store subsequent cultured cells long term in liquid nitrogen.

QUANTITY & CONCENTRATION: 1 mL, 1 x 10^6 cells/mL in 70% DMEM, 20% FBS, 10% DMSO

Background
The human ovary cancer cell line SKOV-3 was derived from the ascitic fluid of a 64 year old Caucasian female with an ovarian tumor in 1973. SK-OV-3 cells are resistant to tumor necrosis factor and to several cytotoxic drugs including diphtheria toxin, cis-platinum and Adriamycin. With epithelial-like morphology, SKOV-3 has abundant activity in both the Boyden chamber chemotaxis and invasion assay. The SKOV-3 cell line is also able to grow in soft agar, an indicator of transformation and tumorigenicity, and displays a relatively high colony forming efficiency. In vivo, SKOV-3 cells can form moderately well-differentiated adenocarcinoma consistent with ovarian primary cells. Our SKOV-3/Luc cell line stably expresses firefly luciferase gene and Puromycin resistant gene.

![Figure 1. SKOV-3/Luc Cell Line. Left: Phase Contrast; Right: Luciferase Activity Assay.](image)

Quality Control
This cryovial contains at least 1.0 x 10^6 SKOV-3/Luc cells as determined by morphology, trypan-blue dye exclusion, and viable cell count. The SKOV-3/Luc cells are tested free of microbial contamination.
Medium
1. Culture Medium: D-MEM (high glucose) or McCoy’s 5A, 10% fetal bovine serum (FBS), 0.1 mM MEM Non-Essential Amino Acids (NEAA), 2 mM L-glutamine, 1% Pen-Strep, (optional) 1 µg/mL Puromycin.
2. Freeze Medium: 70% DMEM or McCoy’s 5A, 20% FBS, 10% DMSO.

Methods
Establishing SKOV-3/Luc Cultures from Frozen Cells
1. Place 10 mL of complete DMEM growth medium in a 50-mL conical tube. Thaw the frozen cryovial of cells within 1–2 minutes by gentle agitation in a 37°C water bath. Decontaminate the cryovial by wiping the surface of the vial with 70% (v/v) ethanol.
2. Transfer the thawed cell suspension to the conical tube containing 10 ml of growth medium.
3. Collect the cells by centrifugation at 1000 rpm for 5 minutes at room temperature. Remove the growth medium by aspiration.
4. Resuspend the cells in the conical tube in 15 mL of fresh growth medium by gently pipetting up and down.
5. Transfer the 15 mL of cell suspension to a T-75 tissue culture flask. Place the cells in a 37°C incubator at 5% CO2.
6. Monitor cell density daily. Cells should be passaged when the culture reaches 95% confluence.

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