

NRK-49F growing culture | 550427

General information

Description	As NRK-52E cells, this cell line originated from the same mixed culture of normal rat kidney cells but has distinct characteristics. The cells exhibit contact inhibition and are very sensitive to viral or chemical transformation, including proteins such as SGF. NRK-49F cells are used for TGF-Beta bioassays.
Organism	Rat
Tissue	Kidney
Synonyms	NRK 49F, NRK49F, NRK clone 49F, Normal Rat Kidney-49F

Characteristics

Morphology	Fibroblast-like
Cell type	Fibroblast
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	NRK-49F (Cytion catalog number 500427)
Biosafety level	1
Depositor	DeLarco

Expression / Mutation

Receptors expressed	Epidermal growth factor (EGF), multiplication stimulating activity (MSA)
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Handling

Culture Medium	EMEM
Medium supplements	10% FBS, w: 2 mM L-Glutamine, w: 1.5 g/L NaHCO ₃ , w: EBSS, w: 1 mM Sodium pyruvate, w: NEAA

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Passaging solution Accutase

Subculturing Remove medium and rinse the adherent cells using PBS without calcium and magnesium (3-5 ml PBS for T25, 5-10ml for T75 cell culture flasks). Add Accutase (1-2ml per T25, 2.5ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at ambient temperature for 10 minutes. Carefully resuspend the cells with medium (10 ml), centrifuge for 3 min at 300 g, resuspend cells in fresh medium and dispense into new flasks which contain fresh medium.

Split ratio A ratio of 1:3 to 1:4 is recommended

Seeding density 2 to 4 x 10⁴ cells/cm²

Fluid renewal 2 to 3 times per week

Freeze medium CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)

Handling of cryopreserved cultures The cells come deep-frozen shipped on dry ice. Please make sure that the vial is still frozen. If immediate culturing is not intended, the cryovial must be stored below -150 degree Celsius after arrival. If immediate culturing is intended, please follow the below instructions: Quickly thaw by rapid agitation in a 37 degree Celsius water bath within 40-60 seconds. The water bath should have clean water containing an antimicrobial agent. As soon as the sample has thawed, remove the cryovial from the water bath. A small ice clump should still remain and the vial should still be cold. From now on, all operations should be carried out under aseptic conditions. Transfer the cryovial to a sterile flow cabinet and wipe with 70% alcohol. Carefully open the vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of culture medium (room temperature). Resuspend the cells carefully. Centrifuge at 300 x g for 3 min and discard the supernatant. The centrifugation step may be omitted, but in this case the remains of the freeze medium have to be removed 24 hours later. Resuspend the cells carefully in 10 ml fresh cell culture medium and transfer them into two T25 cell culture flasks. All further steps are described in the subculture section.

Handling of proliferating cultures One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in 1 or 2 x 50 ml centrifuge tubes, respectively. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Control the cell morphology and confluency under the microscope. Incubate at 37 degree Celsius for a minimum of 24 hours. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Incubate at 37 degree Celsius for a minimum of 24 hours.

Quality control / Genetic profile / HLA

Sterility Mycoplasma contaminations are ruled out through PCR-based and luminescence-based mycoplasma assays. The absence of bacterial, fungal or yeast contamination is controlled through daily visual cell monitoring.

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STR profile

Rat_D1Wox31: 96,100

Rat_D2Wox37: 150,156

Rat_D19Wox11: 220

Rat_D10Wox8: 266,270

Rat_D4Wox7: 153,157,161

Rat_D2Wox27: 211,215

Rat_D5Rat33: 122,138

Rat_D10Wox11: 156

Rat_D1Wox23: 210,214

Rat_D12Wox1: 402,406

Rat_D6Wox2: 104,124

Rat_D8Wox7: 185

Rat_D6Cebr1: 223,233

SRY: x,Y