

Hacat Cell Line (put into culture upon receipt or store in Liquid Nitrogen)

#Cat: NB-19-0058

Size: 1×10^6 cells/vial

HaCaT is a spontaneously immortalized keratinocyte cell line from the adult human skin of a 62-year-old male. Due to their high capacity to differentiate and proliferate in vitro, these cells are extensively utilized in skin biology and differentiation research

Characteristics

Cell Name	Hacat Cell Line
Organism	<i>Homo sapiens</i> , Human
Morphology	Epithelial
Tissue	Skin
Cell type	Keratinocytes
Growth Properties	Adherent
Derivation	Hacat is an <i>in vitro</i> spontaneously immortalized keratinocyte cell line
Age	62 years old
Ethnicity	Caucasian
Gender	Male
Karyotype	Aneuploid (hypotetraploid)
Tumorigenic	No
STR profile	AMEL: X CSF1PO: 9,11 D13S317: 10,12 D16S539: 9,12 D18S51: 12 D21S11: 30.2 D3S1358: 16 D5S818: 12 D7S820: 9,11 D8S1179: 14 FGA: 24 PENTA D: 13 PENTA E: 7,12 THO1: 9.3 TPOX: 11,12 vWA: 16,17
Biosafety Level	1
Product format	Frozen
Storage conditions	Vapor phase of liquid nitrogen

Culture conditions

Complete medium	The base medium for this cell line is Minimum Essential Medium (MEM) with stable glutamine (Catalog No. NB-58-0091). To make the complete growth medium, add fetal bovine serum to a final concentration of 15%
Temperature	37°C
Atmosphere	95% air, 5% CO ₂
Subculturing	Volumes are given for a 75 cm ² flask, increase or decrease the amount of medium needed proportionally for culture vessels of other sizes <ol style="list-style-type: none">1. Remove and discard culture medium2. Briefly rinse the cell layer with DPBS solution to remove all traces of serum that contains trypsin inhibitor3. Add 2 mL of Trypsin-EDTA solution to the flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 10 minutes). Cells that are difficult to detach may be placed at 37°C to facilitate dispersal4. Add 8 mL of complete growth medium and aspirate cells by gently pipetting.5. Add appropriate aliquots of the cell suspension to new culture vessels
Seeding density	1 x 10 ⁴ cells/cm ²
Subculture ratio	1:5-1:10
Medium renewal	Twice per week
Cryopreservation	Basal medium with 30% FBS and 10% (v/v) DMSO

Handling information

Unpacking	<ol style="list-style-type: none">1. Check all containers for leakage or breakage2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below -130°C, preferably in liquid nitrogen vapor, until ready for use
Procedure	To ensure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C. Storage at -70°C will result in loss of viability <ol style="list-style-type: none">1. Quickly thaw the vial by gentle agitation in a 37°C water bath within 1-2 minutes2. Remove the vial from the water bath as soon as the contents are thawed and decontaminate by dipping in or spraying with 70% ethanol. All operations from this point on should be carried out under strict aseptic conditions3. Carefully open the vial and transfer the cell suspension to a centrifuge tube containing 8 mL complete culture medium (room temperature). Centrifuge at 300 x g for 5-7 minutes and carefully discard the supernatant containing residual freezing medium4. Gently resuspend the cell pellet in 10 ml fresh complete medium and dispense into a 75 cm² culture flask5. Incubate the culture at 37°C in a suitable incubator for 24-48 hours and check under the microscope. All further steps are described in the subculture section

Required Products

These products are vital for the proper use of this item and have been confirmed as effective in supporting functionality. If you use alternative products, the quality and effectiveness of the item may be affected

Neo MEM with Earle's Salts, with Stable Glutamine (NB-58-0091)

Neo FBS, Collected in South America (NB-58-0001A, NB-58-0001B)

Neo Trypsin-EDTA (0.05 %) in DPBS (1x) (NB-58-0108)

Neo Freeze 1, Cryopreservation Medium with Fetal Bovine Serum (NB-58-0065)

Neo Dulbecco's PBS (1x), w/o Ca & Mg, w/o Phenol Red (NB-58-0022)

Related Products

Genomic DNA Hacat Cell Line (NB-19-0058-DNA)