

HaCaT | 300493

General Information

**Description**

HaCaT is a cell line derived from human epidermal keratinocytes, characterized by its ability to proliferate and differentiate into various skin cell types. It is widely used in dermatological research, including studies on skin barrier function, wound healing, and the effects of various treatments on skin cells. HaCaT cells are known for their high confluency and stability in culture, making them a valuable model for studying skin biology and disease mechanisms.

**Organism** Human

**Tissue** Skin

Characteristics

**Age** 62 years

**Gender** Male

**Ethnicity** Caucasian

**Cell type** Epithelial cells, 20-25 passages

**Growth properties** Adherent

References and Identifiers

**Citation** HaCaT (ATCC CCL-23) | Cytion 300493

**Biosafety level** 1

**NCBI\_TaxID** 9606

**CellosaurusAccession** CVCL\_0038

Additional Information

**HaCaT | 300493**

**Tumorigenic**     

**Karyotype**       (  )

**Characteristics**

**Culture Medium**      DMEM, w: 4.5 g/L , w: 4 mM L-, w: 3.7 g/L NaHCO<sub>3</sub>, w: 1.0 mM  (  Cytion 82030a)

**Supplements**        10% FBS

**Dissociation Reagent**        1:1  EDTA (  0.05% )  (  0.1% )   PBS  /EDTA.

**Doubling time**       HaCaT  28

- Subculturing**
1.
  2.   (PBS)  T25,  5-10  T75,
  3.  EDTA 0.05%  1-2  T25  2.5
  4.  37°C  10
  5. /EDTA /EDTA  (0.05% , 0.025% EDTA)  TrypLE Express.)  3-4  TrypLE Express.)
  6.   1-5
  7.  (FBS)
  8.

**Split ratio**      A ratio of 1:5 to 1:10 is recommended

**Seeding density**       $1 \times 10^4$

**Fluid renewal**     

**Freeze medium**       (  FBS ) + 10% DMSO

# HaCaT | 300493

## Thawing and Culturing Cells

1. Thaw the vial rapidly in a water bath at 37°C. Remove the vial and centrifuge at 300 x g for 5 minutes. Discard the supernatant and resuspend the pellet in 1 ml of DMEM supplemented with 10% FBS.
2. Seed the cells into a 25 cm<sup>2</sup> flask containing 15 ml of DMEM supplemented with 10% FBS. Incubate at 37°C with 5% CO<sub>2</sub> until cells reach 70-80% confluency.
3. Remove the medium and replace with 15 ml of DMEM supplemented with 10% FBS. Incubate at 37°C with 5% CO<sub>2</sub> until cells reach 70-80% confluency.
4. Remove the medium and replace with 15 ml of DMEM supplemented with 10% FBS. Incubate at 37°C with 5% CO<sub>2</sub> until cells reach 70-80% confluency.
5. Remove the medium and replace with 15 ml of DMEM supplemented with 10% FBS. Incubate at 37°C with 5% CO<sub>2</sub> until cells reach 70-80% confluency.
6. Remove the medium and replace with 15 ml of DMEM supplemented with 10% FBS. Incubate at 37°C with 5% CO<sub>2</sub> until cells reach 70-80% confluency.
7. Remove the medium and replace with 15 ml of DMEM supplemented with 10% FBS. Incubate at 37°C with 5% CO<sub>2</sub> until cells reach 70-80% confluency.
8. Remove the medium and replace with 15 ml of DMEM supplemented with 10% FBS. Incubate at 37°C with 5% CO<sub>2</sub> until cells reach 70-80% confluency.

**Incubation Atmosphere** 37°C, 5% CO<sub>2</sub>, humidified

**Flask Coating** Cell culture medium

**Freezing Procedure** Harvest cells into a 15 ml centrifuge tube and centrifuge at 300 x g for 5 minutes. Resuspend the pellet in 1 ml of DMEM supplemented with 10% FBS. Add 100 µl of 10% DMSO and freeze at -80°C.

**Shipping Conditions** Store at -80°C

**Storage Conditions** Store at -150°C for up to 196 months

## Genotype / Phenotype / HLA

**Sterility** Cells are free of mycoplasmas and other contaminants. PCR confirmed.

**XXXXXX HaCaT | 300493**

**XXXXXXXX STR**

**Amelogenin:** x,x  
**CSF1PO:** 9,11  
**D13S317:** 10,12  
**D16S539:** 9,12  
**D5S818:** 12  
**D7S820:** 9,11  
**TH01:** 09. Mrz  
**TPOX:** 11,12  
**vWA:** 16,17  
**D3S1358:** 16  
**D21S11:** 28,30.2  
**D18S51:** 12  
**Penta E:** 7,12  
**Penta D:** 11,13  
**D8S1179:** 14  
**FGA:** 24  
**D1S1656:** 11,12  
**D2S1338:** 17,25  
**D12S391:** 18,23  
**D19S433:** 13,14

**XXXXXXXX HLA**

**A\*:** '31:01:02  
**B\*:** '40:01:02, '51:01:01  
**C\*:** 03:04:01, 15:02:01  
**DRB1\*:** '04:01:01, '15:01:01  
**DQA1\*:** '01:02:01, '03:03:01  
**DQB1\*:** '03:01:01, '06:02:01  
**DPB1\*:** '03:01:01, '04:01:01  
**E:** 01:03:01, 01:03:02