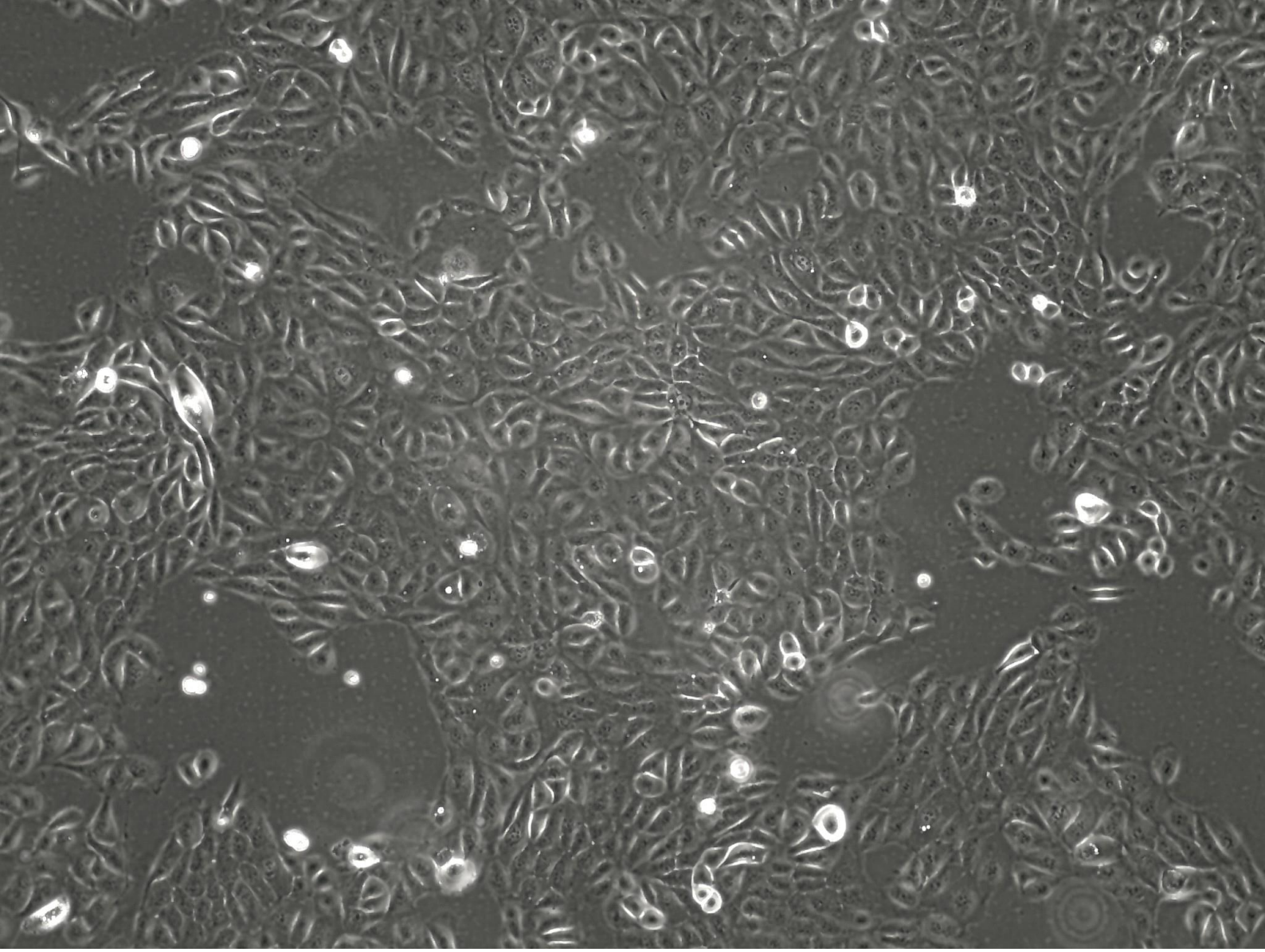


Human dermal keratinocytes

NHEK/SVTERT3-5

Good experiments start with the right choices – hTERT immortalized cell lines retain the cell-type specific phenotype while constantly growing. No more lot-to-lot variability. No more growth arrest.

Just the perfect choice!

Human dermal keratinocytes (NHEK/SVTERT3-5)

Human keratinocytes represent the major component of the epidermal tissue with an essential role in forming an effective barrier between the human body and the outside.

NHEK/SVTERT3-5 in a nutshell

- Original tissue / isolated cells: **human adult skin (pendulous abdomen) / keratinocytes (NHEK)**
- Life span extension of isolated NHEKs by introduction of **hTERT** (catalytic subunit of telomerase) and **SV40 ER** (Simian Virus 40 early region / largeT and small t antigens)
- **Single clone** with distinguished keratinocyte markers and functions and unlimited growth potential
- Ability to differentiate into a well-organized **3D skin equivalent in an air-liquid interface**
- Expression of **typical keratinocyte markers** after 3D differentiation

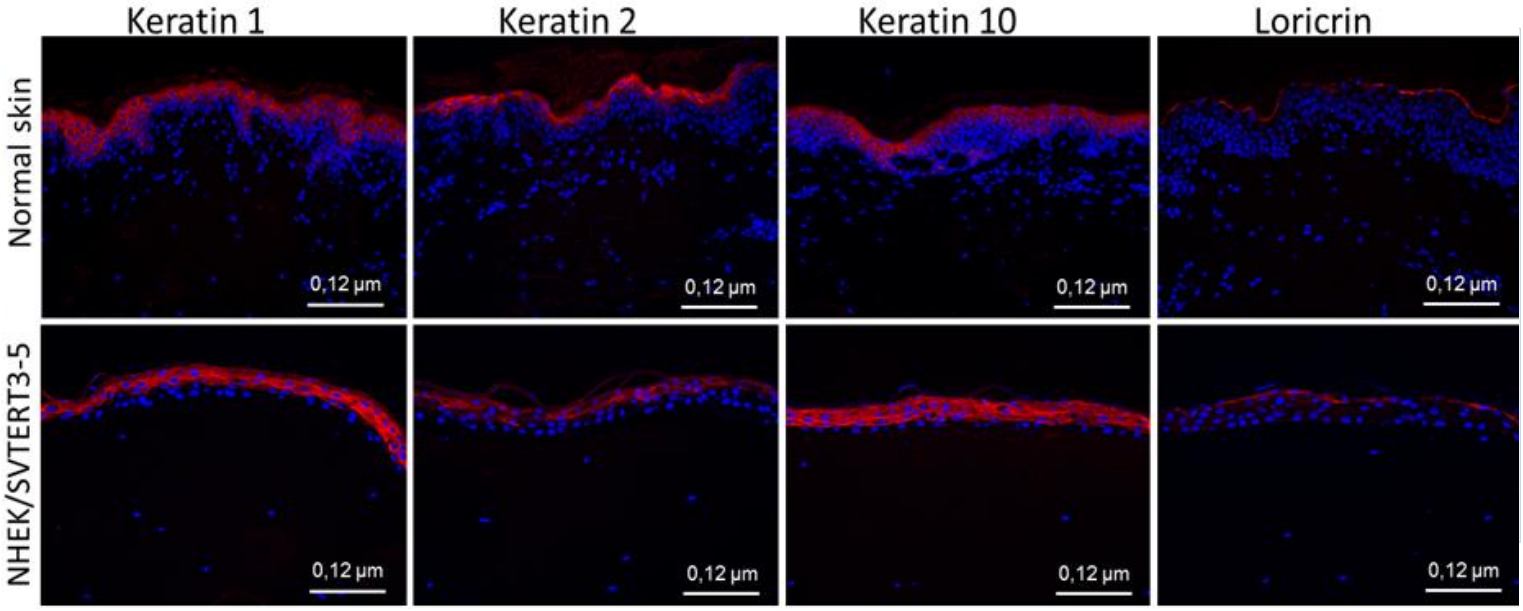
Cell-type specific characteristics

Continuous growth *in vitro*

The cell line was continuously cultured for more than 50 population doublings without showing signs of growth retardation or replicative senescence with a constant population doubling time of 48-60 hours.

Marker Expression in 3D skin equivalents

Immunofluorescence stainings of 3D skin equivalents established with NHEK/SVTERT3-5 cells show expression of the cell-type specific markers Keratin-1, Keratin-2, Keratin-10 and Loricrin with a staining pattern similar to normal skin.



Applications

- Study of pathogenesis of skin-related diseases
- Representative in vitro model to study wound healing processes
- Establishment of standardizable 3D skin equivalents for toxicity studies
- Study of drug delivery across skin barrier and skin irritation, corrosion
- Establishment of gene-edited in vitro model systems

Adherence to GCCP-Standards!

Evercyte is committed to follow the principles of Good Cell Culture Practice (GCCP, Coecke et al., 2005). Therefore, our cell lines are:

- **established following highest ethical standards** (studies are approved by IRB in accordance with the Declaration of Helsinki)
- **quality tested** (sterility, absence of specific human-pathogenic viruses, STR-Profile, longevity)
- **characterized for expression of cell type specific markers and functions**

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