

Human urine-derived podocytes,
hTERT and SV40 early region immortalized
PODO/SVTERT152

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 urine-derived podocytes (PODO/SVTERT152)

Podocytes are terminally differentiated epithelial cells that cover the capillaries of the glomerulus at the basal membrane and are consequently involved in the filtration of blood plasma within the Bowmans' capsule. The cells form foot-like branches that build up a network of interdigitating processes around the glomerular capillaries. Podocytes are also shed into the urine from where they can be isolated in a non-invasive manner. Since damage or depletion of functional podocytes eventually leads to kidney disease, the cells are indicators for the progression of glomerular injuries and at the same time valuable drug targets.

_in a nutshell

- Source: **human urine sediment from healthy donor**
- Transduction of **podocytes** with a retrovirus carrying the catalytic subunit of **human telomerase (hTERT)** and transfection with a plasmid carrying **SV40 early region**.
- Expression of cell-type specific markers **Nephrin, WT1 and Synaptopodin**.

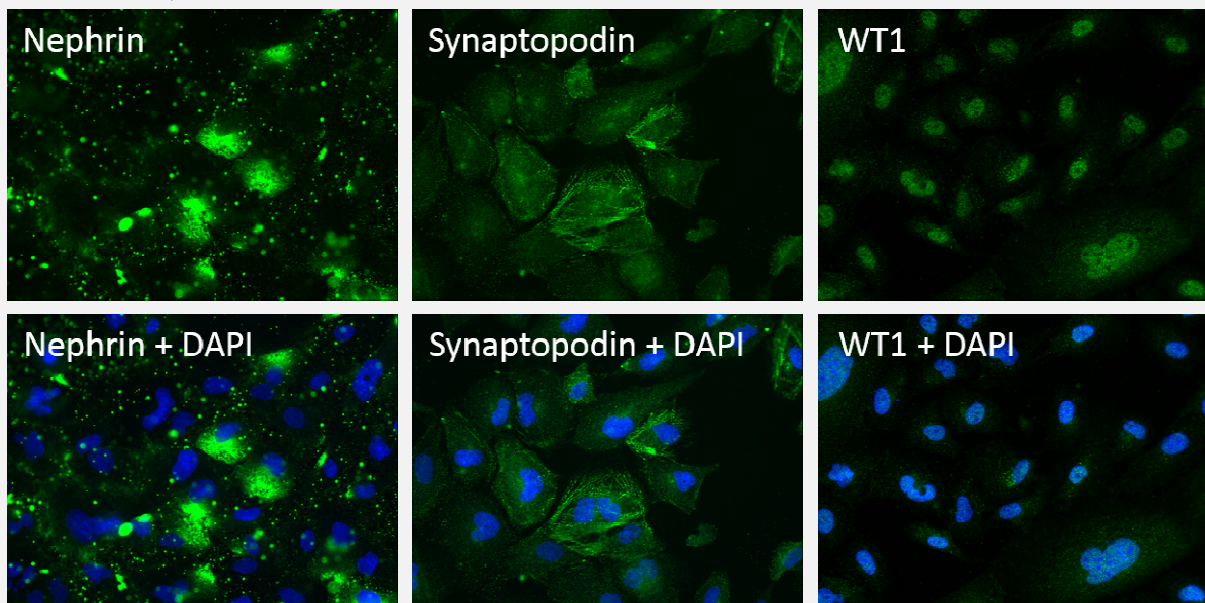
_cell-type specific characteristics

▶ Continuous growth *in vitro*

The cell line was continuously cultured for more than 80 population doublings without showing signs of growth retardation or replicative senescence with a population doubling time of 36-48 hours.

▶ Marker Expression (selected markers)

Immunofluorescence stainings of undifferentiated Podocytes show expected expression patterns of the cell-type specific markers Nephrin, Synaptopodin and WT1.



_applications

- Modelling of glomerulopathies and consequent renal fibrosis
- Detection and prediction of glomerulus associated toxicity in pre-clinical drug development
- Development of glomerulus-protective therapeutics

_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**