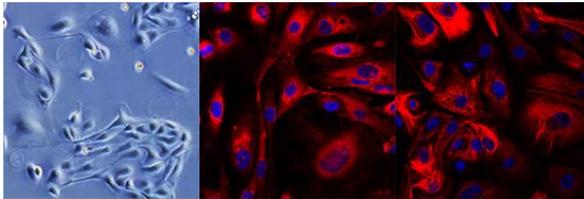




Kidney Proximal Tubule Cells



Aquaporin 1

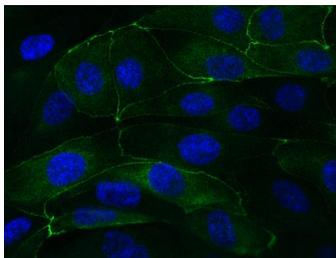
Cytokeratin

Cryopreserved Human Kidney Proximal Tubules

Cells are isolated from the cortex of human kidneys that are deemed not suitable for transplantation and have received consent to be donated for research. After digestion of the cortex, proximal tubules are isolated by magnetic positive selection as a pure population. An integral part of the nephron, proximal tubule cells regulate the pH of the filtrate by exchanging hydrogen ions for bicarbonate ions in the filtrate; they are also responsible for secreting organic acids, such as creatinine and other bases, into the filtrate.

QC Testing

Proximal tubule cells are characterized by yield, viability, and morphology. The purity is analyzed using immunofluorescence microscopy for proximal tubule specific markers aquaporin 1, ENT1, Na⁺K⁺ATPase and, cytokeratin. Each lot has a minimum of 500,000 cells per vial and a viability of $\geq 90\%$. Cells are terminally differentiated and can be expanded for at least 15 population doublings. Proximal tubules are further evaluated for γ -glutamyl transferase activity and tight junction formation by staining with ZO1.



ZO-1

Advantages

- **Reproducibility:** same donor can be used for long-term testing
- **Convenience:** no waiting for fresh proximal tubule cells to become available and the cryopreserved vials are not time-sensitive
- **High post-thaw yield**
- **Characterization:** cells have been extensively characterized by morphology, functionality, and surface/ internal marker expression
- **More comprehensive donor information**

Applications

Novabiosis Kidney Proximal Tubule cells are ideal in studies of:

- function and pathophysiology of the kidney
- toxicity
- drug transporter research
- tissue engineering
- single-cell analysis of individual donors
- ion channels
- kidney disease progression

Donor information including: cause of death, age, gender, race, BMI, diabetic status, smoking history, alcohol use, substance use, HLA typing, serology and culture results, and co-morbidities, if any, is also included on the CoA.

Serology results include (positive or negative):

CMV, EBV, Toxo, HBV, HCV, HIV-1, HIV-2. Additional serology results may be provided upon request.

Culture results include (positive or negative):

Gram +, Gram -, Mycoplasma, Fungi.



Catalog Information

Cryopreserved Human Kidney Proximal Tubule Cells

- Cat. # 3021

Product Storage and Warranty

CULTURES HAVE A LIMITED LIFESPAN *IN VITRO*.

Upon receipt, immediately store cryovial(s) in vapor phase liquid nitrogen.

Cryopreserved human proximal tubule cells are viable for at least 2 years when stored under these conditions.

Novabiosis guarantees the performance of its cells only if following Novabiosis-specific instructions exclusively and the recommended products and protocols are used and followed.

The performance of the cells is not guaranteed if any modifications are made.

THESE PRODUCTS ARE FOR RESEARCH USE ONLY.