

# Human Telomere Length Real Time PCR Detection Kit

## Real-Time Quantitative PCR Assay

### What are telomeres

Telomeres are specialized DNA-protein structures located at the ends of human chromosomes. They protect genetic material and ensure chromosome stability. Each time a cell divides, telomeres gradually shorten, acting like a “biological clock” that limits a cell’s lifespan. When telomeres become critically short, cells lose their ability to divide and eventually enter senescence or die.

### Telomere Length and Aging

Telomere length is a powerful biomarker of aging. Shortening with each cell division, telomeres reflect both cellular lifespan and overall health. Genetics, environment, and lifestyle all play a role in this process. By measuring telomere length, we can better understand our “cellular age” and take steps to adjust lifestyle habits—helping slow aging and promote healthier living.

### Test Principle

This kit uses real-time qPCR to specifically amplify human telomere repeats (TTAGGG). It measures the ratio of telomere (T) repeats to single-copy (S) genes (T/S ratio), which reflects relative telomere length. By modeling the T/S ratio against age, telomere “biological age” can be assessed.



- The 2009 Nobel Prize in Physiology or Medicine: awarded for their contributions to the study of telomeres and telomerase



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## Application Scenarios



### Health management and preventive care

Wellness monitoring, cardiovascular, metabolic disorders, and pulmonary fibrosis.



### Anti-aging and cosmetic evaluation

Cellular aging measurement, cosmetic care, and cell therapy assessment.



### Stress-related health studies

Effects of chronic stress, smoking, drinking, sedentary habits, and poor routines.



### Clinical & scientific research

Telomere biology, cellular aging, and translational medicine.

## Ordering Information

Cat No.	Product Name	Format	Sample Types	Shelf Life	Storage	Kit Size	Certification
TP060101T2024	Human Telomere Length Real Time PCR Detection Kit	Liquid	Oropharyngeal swabs and whole blood	12 months	-20±5°C	24 Tests/Kit	CE
TP060101T2048						48 Tests/Kit	

\*Software Support: Automatically analyze telomere results and get your length, age, and peer ranking in one instant report.

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