

Abstract

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A quantitative real-time PCR method for absolute telomere length.

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BACKGROUND: Telomere shortening is an important risk factor for cancer and accelerated aging. Here we describe the development of a simple and reproducible method to measure absolute telomere length.

SUMMARY: Based on Cawthon's quantitative real-time PCR (qRT-PCR) assay, our method uses an oligomer standard that can be used to generate absolute telomere length values rather than relative quantification. We demonstrate a strong correlation between this improved method and the "gold standard" of telomere length measurement-terminal restriction fragment analysis (TRF) by Southern hybridization.

CONCLUSION: The capability to generate absolute telomere length values should allow a more direct comparison of results between experiments within and between laboratories.

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