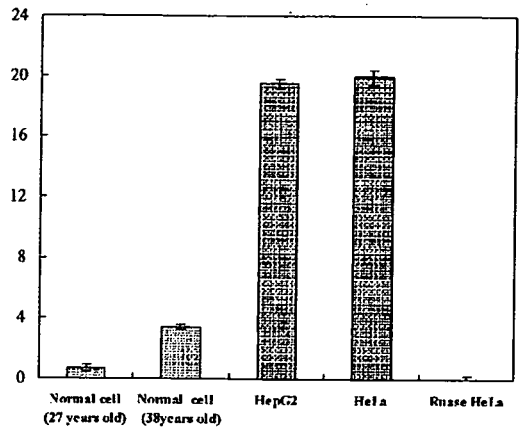

Fig. 6 Telomerase activities in several human cells. The cell lysates of oral cavity cells from two human specimens (male at 38 years old, and female at 27 years old) and two cell lines of HeLa and HepG2 were used for the assay of the telomerase activity under the recommended conditions (n = 3 each). The specific activity of telomerase was represented as the amount of the amplified products that were equivalent to telomerase products generated for 1 h of the enzymatic reaction per one of cells. In the experiment for the right column, the lysates of HeLa cells were treated by 0.01 unit ribonuclease at 37°C for 30 min before the telomerase reaction.

sensitively detected by the TMPG reaction. This method could distinguish the telomerase activities in immortal cells from those in normal somatic cells with low activity of telomerase.

Our method has the following advantages compared with other methods,[16,22] although the separation and CL reaction are required for the telomerase product: 1) our assay can be applied to any type of telomerase assay based on telomeric repeat amplification protocol, 2) this method shows higher sensitivity for the telomerase assay, and thus can determine a very low telomerase activity over a wide range, and 3) it is rapid and simple. Thus, this proposed method would be a convenient tool for the determination of telomerase activity.

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