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[\[PDF \(1114K\)\]](#) [\[References\]](#)**DNase γ -dependent and -independent apoptotic DNA fragmentations in Ramos Burkitt's lymphoma cell line**[Ryushin Mizuta](#)¹⁾, [Midori Mizuta](#)¹⁾, [Shinsuke Araki](#)¹⁾²⁾, [Kohei Suzuki](#)¹⁾, [Shota Ebara](#)¹⁾, [Yuki Furukawa](#)¹⁾, [Daisuke Shiokawa](#)²⁾, [Sei-ichi Tanuma](#)²⁾ and [Daisuke Kitamura](#)¹⁾

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ABSTRACT

DNA fragmentation is a biochemical hallmark of apoptosis. Several endonucleases, including CAD/DFF40 and endonuclease G, are implicated in DNA fragmentation. DNase γ has also been considered to be one of the enzymes involved, but its role in relation to CAD/DFF40 in apoptosis has not been fully elucidated. Here, we distinguished between DNase γ -dependent and CAD/DFF40-dependent DNA fragmentations. We found that DNase γ activities appeared in the late apoptotic phase and accelerated DNA fragmentation. Thus, even if the apoptotic DNA fragmentation is initiated by CAD/DFF40, DNase γ is required for the more complete digestion of the genomic DNA in dying cells.

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