

Circular RNA TOP2A Promotes Apoptosis and Suppresses Cell Viability of Ox-LDL-induced HAEC Cells via Sponging MicroRNA-27a-3p

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ABSTRACT This study explored impacts of circular RNA TOP2A and miR-27a-3p on HAECs after ox-LDL treatment. RNA expressions of circRNA TOP2A and miR-27a-3p were assessed by RT-qPCR in normal and ox-LDL-treated HAECs, showing circRNA TOP2A was inhibited and miR-27a-3p was upregulated after ox-LDL treatment. HAECs viabilities were promoted by ox-LDL treatment but overexpressed circRNA TOP2A suppressed the cell viability. Moreover, Ki-67 protein expression was downregulated while cleaved caspase-3 was inhibited. MiR-27a-3p was then confirmed to be sponged and suppressed by circRNA TOP2A while miR-27a-3p mimics promoted its expression. Additionally, decreased cell viability caused by overexpressed circRNA TOP2A was also reversed by miR-27a-3p overexpression. Furthermore, downregulated Ki-67 and increased cleaved caspase-3 protein expressions caused by circRNA TOP2A upregulation were also restored by overexpressed miR-27a-3p, resulting in promoted Ki-67 and decreased cleaved caspase-3.