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# MicroRNA 200c-3p Regulates Autophagy Mediated Upregulation of Endoplasmic Reticulum Stress in PC-3 Cells

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**Abstract :** Autophagy is a cellular response to stress or environment on cell survival. Here, we investigated the role of ectopic expression of miR 200c-3p in autophagy. Ectopic expression of miR 200c-3p increased the expression of IRE1alpha, ATF6 and CHOP by western blot and RT-qPCR. Furthermore, the level of microRNA 200c-3p was enhanced by treatment of TG or overexpression of GRP 78. Also, ectopic expression of miR200c-3p increased the LC3 II expression by western blot and RT-qPCR. Also, we found that western blot assay showed that miR200c-3p inhibitor was blocked the starvation–induced LC3II levels. Furthermore, starvation stress increased the level of miR200c-3p in different kinetics. Ectopic expression of miR200c-3p attenuated LC3II expression in IRE1 siRNA transfected PC3 cells. Here, we first demonstrate that miR200c-3p regulates autophagy via ER stress pathway.

**Keywords :** Autophagy, ER stress, LC3II, miR200c-3p
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