



# Effects of miR-26a on the expression of Beclin 1 in retinoblastoma cells

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**ABSTRACT.** The aim of this study was to evaluate the effects of miR-26a on Beclin 1 expression in retinoblastoma (RB) cell lines (Y79 and WERi-RB-1). RB cells were transfected with miR-26a mimic, antagomir-26a, or control mimic. The Beclin 1 mRNA and protein levels were detected by quantitative polymerase chain reaction and western blot, respectively. The activity of Beclin 1 3'-UTR reporter gene was detected with the luciferase assay. After transfection with miR-26a mimic, Beclin 1 mRNA and protein levels as well as the activity of the 3'-UTR reporter gene decreased. However, all were increased upon inhibition of miR-26a with antagomir-26a. Beclin 1 is the target of miR-26a in human RB cell lines Y79 and WERi-RB-1, and miR-26a inhibits the expression of Beclin 1 by reducing its mRNA and protein levels.

**Key words:** miR-26a; Beclin-1; Retinoblastoma