

MicroRNA-146b Suppresses Trophoblast Migration, Invasion, and EMT in Preeclampsia Through Regulation of PTEN

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ABSTRACT This study aimed to clarify miR-146b's role in preeclampsia (PE). Placental tissues were obtained from 20 PE individuals and 20 normotensive pregnant participants, and all cell experiments were performed using HTR-8/SVneo cells. miR-146b's was detected, and its role in cell behaviours was evaluated. The target gene was identified. Our findings revealed that miR 146b was upregulated in placental specimens of women diagnosed with PE. Furthermore, miR 146b inhibition markedly enhanced the migratory, invasive, and EMT phenotypes of HTR 8/SVneo cells. miR-146b was shown to target PTEN as its downstream effector, and the miR-146b/PTEN axis was revealed to govern the activation process of the PI3K/AKT cascade. Collectively, miR 146b may participate in the pathogenesis of preeclampsia via modulating trophoblast biological functions, highlighting its potential as a diagnostic biomarker and therapeutic target for PE.