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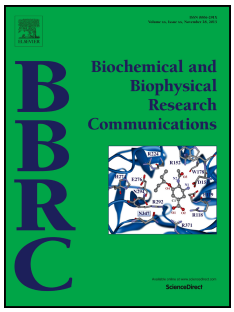

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miR-320a regulates cell proliferation and apoptosis in multiple myeloma by targeting pre-B-cell leukemia transcription factor 3

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Abstract

Aberrant expression of microRNAs (miRNAs) is implicated in cancer development and progression. While miR-320a is reported to be deregulated in many malignancy types, its biological role in multiple myeloma (MM) remains unclear. Here, we observed reduced expression of miR-320a in MM samples and cell lines. Ectopic expression of miR-320a dramatically suppressed cell viability and clonogenicity and induced apoptosis *in vitro*. Mechanistic investigation led to the identification of Pre-B-cellleukemia transcription factor 3 (PBX3) as a novel and direct downstream target of miR-320a. Interestingly, reintroduction of PBX3 abrogated