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Author: Lan Denga Xiuju Wang Ling Jiang Jilong Yang Xuan Zhou Zhigang Lu Haiyan Hu

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Modulation of miR-185-5p expression by EBV-miR-BART6 contributes to developmental differences in ABCG4 gene expression in human megakaryocytes

Lan Deng*[1,2], Xiuju Wang[3]*, Ling Jiang[4], Jilong Yang[1], Xuan Zhou[1], Zhigang Lu [#1], Haiyan Hu[#2]

1. Department of Hematology, Zhujiang Hospital, Southern Medical University. No 253 Industrial Avenue Haizhu District of Guangzhou City, Guangdong Province, China, 501282.
2. Department of Oncology, Shanghai Sixth People's Hospital, Shanghai JiaoTong University, No 600 Yishan Road Xuhui District, Shanghai, China, 200233.
3. Department of Hematology, Sun Yat-Sen Memorial Hospital, Sun Yat-Sen University, Guangzhou, People's Republic of China ; Key Laboratory of Malignant Tumor Gene Regulation and Target Therapy of Guangdong Higher Education Institutes, Sun Yat-Sen Memorial Hospital, Sun Yat-Sen University, No 170 Yanjiang Road Yuexiu District of Guangzhou City, Guangdong Province, China, 510120
4. Department of Hematology, Nanfang Hospital, Southern Medical University, No 1838 North of Guangzhou Avenue Baiyun District of Guangzhou City, China, 510515

Abstract

Immune thrombocytopenia (ITP) is an acquired autoimmune disorder characterized by low platelet count and bleeding, and is usually triggered by viral infections. We previously reported that 14 viral microRNAs of megakaryocytes cultured with serum from patients with ITP, including ebv-miR-BART6, are up-regulated. Previous research has reported that ebv-miR-BART6 down-regulated the expression of miR-185-5p. We therefore predicted that the ABCG4 gene, which is highly expressed in megakaryocyte progenitor cells, is a direct target of miR-185-5p. We hypothesized that ebv-miR-BART6 may play a role in development and differentiation of megakaryocytes. First, we verified the negative regulation of ABCG4 by miR-185-5p through luciferase assay analysis. Second, after transfection of ebv-miR-BART6 into megakaryocytes

[1] * The first two authors contributed equally to this work.
2 # To whom correspondence should be addressed to ZhigangLu_zhujiang@126.com and xuri1104@163.com. This work was supported by grants from the Natural Science Foundation of Guangdong Pr (No. S2012010008748, 2015A030313251 and S2013010014715) and National Natural Science Foundatio of China (No81400103 and 81372873).