



Expression of Rap1GAP in human myeloid disease following microarray selection

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ABSTRACT. To find the underlying causes of primary myelodysplastic syndrome (MDS), the gene expression profiling of both CD34⁺ cells and bone marrow mononuclear cells from MDS patients was performed using oligonucleotide microarray and cDNA microarrays, respectively. Several candidate genes which were differentially expressed in MDS patients versus normal controls were selected and confirmed in expanding samples by quantitative real-time reverse transcription-polymerase chain reaction after clustering and bioinformatics analysis. One of these genes, RAP1GAP, was found to be expressed at a significantly higher level in patients with MDS in comparison with those suffering from other hematopoietic diseases including leukemia ($P < 0.01$). We propose that over-expression of RAP1GAP gene may play a role in the pathogenesis of MDS.

Key words: Myelodysplastic syndrome; RAP1GAP; Real-time PCR