Analysis of SERF in Thai blood donors

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Abstract

The Cromer blood group system consists of nine high-prevalence and three low-prevalence antigens carried on decay-accelerating factor (DAF). We recently described one of these Cromer high-prevalence antigens, SERF, the absence of which was found in a Thai woman. The lack of SERF antigen in this proband was associated with a substitution of nucleotide 647C>T in exon 5 of DAF, which is predicted to be a change of proline to leucine at amino acid position 182 in short consensus repeat (SCR) 3 of DAF. This study reports on PCR-RFLP analysis of the SERF allele with BstNI restriction endonuclease on more than one thousand Thai blood donor samples. One new donor homozygous (647T) and 21 donors heterozygous (647C/T) for the SERF allele were found. Among this cohort of random Thai blood donors, the SERF allele frequency was 1.1 percent. Thus, like other alleles in the Cromer blood group system, SERF is found in a certain ethnic group.

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