

**Supplementary material 1.** (a) Parametric linkage study of chromosome 6. The horizontal axis is the genetic distance (centimorgan) starting at the short arm of chromosome 6. The vertical axis shows LOD scores. The location of *LAMA2* was indicated by arrow. The positive LOD score is observed in the *LAMA2* locus. (b) Copy number analysis using Genome-Wide Human SNP array 6.0 shown by Genotyping Console (Affymetrix). No copy number alteration is shown in this region, confirming the homozygosity. The location of *LAMA2* is indicated by arrow.