Supplemental information
Blood and mouthwash samples were collected and DNA was extracted as previously described.[14]

A deletion of the two late cornified envelope (LCE) genes, LCE3C_LCE3B-del, was determined using the primers designed outside and inside of the deletion:

a) Outside primers: forward ggttgtttgtccactcatttattac, reverse tagattattttgagatacgtcccatc; PCR amplicon 450 bp with deletion)
b) Inside primers: forward cagttgtccctcacccaagt, reverse gggatgagggaactgtgaga; PCR amplicon 450 bp without deletion (Supplemental figure).

The PCR mixture used 1x SYBR master mix (Applied Biosystems, Foster City, CA), either inside or outside primer pair (final concentration of primer 0.5µM) and 10 ng of DNA template in total volume of 20µl. PCR was performed in a 7300 thermocycler (PerkinElmer Applied Biosystems) with the following cycle conditions: 95°C for 10 min, 40 cycles of 95°C for 15sec and 60°C for 1 min with a final extension step at 72°C for 5 min. PCR products from representative DNA samples were run on agarose gels (1.5%) to confirm the size of the PCR amplicon.

The tagging SNP rs4112788[13] was also genotyped using a Taqman assay following the manufacturer's instructions (Applied Biosystems, Assay ID C_31910050_10).

Supplemental figure. Location of primers, SNP and LCE3C-3B deletion