

## **Description of Additional Supplementary Files**

**Supplementary Data 1:** List of candidate variants identified for each large family by whole-genome sequencing.

**Supplementary Data 2:** List of candidate variants identified for each small family by whole-exome sequencing.

**Supplementary Data 3:** DEGs for mutant DGRs vs WT DRGs.

**Supplementary Data 4:** Detailed information of each subject in rosacea families.

**Supplementary Data 5:** qPCR primers.