**Supplementary data**

Supplementary data 1. the list of translated ORFs and binding sites in VPS9D1-AS1

Supplementary data 2. Multiple sequence alignments of regions that contain orf143 orthologs and its 1000 nt flanking sequences in 26 mammalian species.

Supplementary data 3. The top 20 BLASTP and TBLASTN hits of orf143 based on the search against the NCBI non-redundant database. The sequence of orf143 without the TR array yielded fewer than 20 hits and no hit for TBLASTN and BLASTP respectively.