



**S2\_Fig1. The DNA sequence of transmembrane domain mutant line *cspg4<sup>em1twu0405</sup>* was aligned to the wild-type *cspg4* cDNA sequence (ENSDART00000112782). *cspg4<sup>em1twu0405</sup>* had 275 bp insertion and the insertion sequences including 6 base pairs repeats sequence of the 6586th to 6590th bp of wild-type *cspg4* cDNA sequence (labeled by yellow box) and 159 bp repeat sequence from its 6116th bp to the 6274th bp of *cspg4* cDNA sequence (labeled by green box) and 110 bp insertion sequence identical to the 6476th bp to the 6585th bp of *cspg4* cDNA (labeled by blue box). gRNA target sequence was indicated by lower case.**