



**Figure S2** Markers used to determine the chromosome location of *Qphs.pseru-3AS*. (A) An agarose gel image shows *TaPHS1* specific primers amplified only in Chinese Spring nulli-tetrasomic lines carrying 3A chromosome. No PCR product was amplified when the 3A chromosome was replaced by 3B (N3A-T3B) or 3D (N3A-T3D). (B) An agarose gel image shows an STS marker developed from the wheat EST BE423484 and detected polymorphism between the resistant genotypes (Rio Blanco and 08F485) and the susceptible genotypes (NW97S186 and 08F481). (C) An electropherogram of polymorphic STS marker developed from the EST CA654295 analyzed using capillary electrophoresis in an ABI 3730 DNA analyzer. (D) An electropherogram of an SNP marker developed by re-sequencing wheat EST CD910417 analyzed using SNPshot in an ABI 3730 DNA analyzer.