



Additional file 7: Mapping differences between isoforms on PsbO structure in selected species. Differences between isoforms of (A) *A. thaliana*, (B) *Zea mays* and (C) *Physcomitrella patens* are shown in green. The homologous model of the *Solanum tuberosum* PsbO2 based on the X-ray structure of cyanobacterial PsbO [PDB:3ARC] [5] was constructed using Swiss-Model program [38]; the first 13 N-terminal amino acids were not present in the template structure, so they were pasted in the model without attempts to show any folding.