

**S1 Text.** Multiple alignment of protein sequences of UBC2 from various plants by Clustal W.

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B.rapa          MSTPARKRLMRDFKRLQQDPPAGISGAPHDNNIMLWNAVIFGPDDTPWDGGTFKLSLQFS
Triticum       MSTPSRKRLMRDFKRLQHDPPAGISGAPHDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
Sorghum        MSTPARKRLMRDFKRLQQDPPAGISGAPHDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
S.tuberosum    MSTPSRKRLMRDFKRLQQDPPAGISGAPYDNNIMLWNAVIFGPDDTPWDGGTFKLTQFS
Zea            MSTPARKRLMRDFKRLQQDPPAGISGAPYDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
S.lycopersicum MSTPARKRLMRDFKRLQQDPPAGISGAPYDNNIMLWNAVIFGPDDTPWDGGTFKLTQFS
Sesamum        MSTPARKRLMRDFKRLQQDPPAGISGAPYDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
N.tabacum      MSTPARKRLVRDFKRLQQDPPAGISGAPYDNNIMLWNAVIFGPDDTPWDGGTFKLTQFS
Capsicum       MSTPARKRLMRDFKRLQQDPPAGISGAPYDNNIMLWNAVIFGPDDTPWDGGTFKLTQFS
N.benthamiana  MSTPARKRLMRDFKRLQQDPPAGISGAPYDNNIMLWNAVIFGPDDTPWDGGTFKLTQFS
N.sylvestris   MSTPARKRLMRDFKRLQQDPPAGISGAPYDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
B.napus        MSTPARKRLMRDFKRLQQDPPAGISGAPQDNNIMLWNAVIFGPDDTPWDGGTFKLSLQFS
Arabidopsis    MSTPARKRLMRDFKRLQQDPPAGISGAPQDNNIMLWNAVIFGPDDTPWDGGTFKLSLQFS
Hevea          MSTPARKRLMRDFRRLQQDPPAGISGAPQDNNIMLWNAVIFGPDDTPWDGGTFKLTQFA
Gossypium      MSTPARKRLMRDFKRLQQDPPAGISGAPQDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
Glycine        MSTPARKRLMRDFKRLQQDPPAGISGAPQDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
Medicago      MSTPARKRLMRDFKRLQQDPPAGISGAPQDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
Cucumis        MSTPARKRLMRDFKRLQQDPPAGISGAPQDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
Vitis          MSTPARKRLMRDFKRLQQDPPAGISGAPQDNNIMLWNAVIFGPDDTPWDGGTFKLTQFT
*****:****:***:***:*****:*****:*****:*****:*****:
EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Triticum       EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Sorghum        EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
S.tuberosum    EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Zea            EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
S.lycopersicum EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Sesamum        EDYPNKPPTVRFISRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
N.tabacum      EDYPNKPPTVRFISRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Capsicum       EDYPNKPPTVRFISRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
N.benthamiana  EDYPNKPPTVRFISRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
N.sylvestris   EDYPNKPPTVRFISRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
B.napus        EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Arabidopsis    EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Hevea          EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Gossypium      EDYPNKPPTVRFISRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Glycine        EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Medicago      EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Cucumis        EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
Vitis          EDYPNKPPTVRFVSRMFHPNIYADGSICLDILQNWSPIDVAAILTSIQSLLCDPNPNS
*****:*****:*****:*****:*****:*****:*****:*****:
PANSEARMYSENKREYNRKVRDVEQSWTAD
Triticum       PANSEARMFSENKREYNRKVREIVEQSWTAD
Sorghum        PANSEARLFSENKREYNRKVREIVEQSWTAD
S.tuberosum    PANSEARMFSENKREYNRKVREVEQSWTAD
Zea            PANSEARMFSENKREYNRKVREVEQSWTAD
S.lycopersicum PANSEARMFSENKREYNRKVREIVEQSWTAD
Sesamum        PANSEARLFSENKREYNRKVREIVEQSWTAD
N.tabacum      PANSEARMFSENKREYNRKVREIVEQSWTAD
Capsicum       PANSEARMFSENKREYNRKVREIVEQSWTAD
N.benthamiana  PANSEARMFSENKREYNRKVREIVEQSWTAD
N.sylvestris   PANSEARMFSENKREYNRKVREIVEQSWTAD
B.napus        PANSEARMFSESKREYNRRVREVEQSWTAD
Arabidopsis    PANSEARMFSESKREYNRRVREVEQSWTAD
Hevea          PANSEARMFSENKREYNRRVREIVEQSWTAD
Gossypium      PANSEARMFSENKREYNRRVREIVEQSWTAD
Glycine        PANSEARMFSENKREYNRKVREIVEQSWTAD
Medicago      PANSEARMFSENKREYNRRVREIVEQSWTAD
Cucumis        PANSEARMFSENKREYNRRVREIVEQSWTAD
Vitis          PANSEARMFSENKREYNRKVREIVEQSWTAD
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