

**Supplement table 1** Genes and predicted functions locating in the major QTL regions related with seed size in adzuki bean

Gene name	Predicted functions	Gene name	Predicted functions
Vigan.02G26 5100	Hypothetical protein	Vigan.02G264 700	Similar to Uncharacterized protein. [I1JWC1, Glycine max]
Vigan.02G26 3100	Similar to MYB-related protein12 [V5T6P4, <i>Arachis hypogaea</i> ]	Vigan.02G264 900	Similar to Uncharacterized protein. [I1N7G4, Glycine max]
Vigan.02G26 3200	Similar to protein. [D7LHJ1, <i>Arabidopsis lyrata</i> subsp. <i>lyrata</i> ]	Vigan.02G265 000	Similar to Uncharacterized protein. [I1KDE1, Glycine max]
Vigan.02G26 3500	Similar to Apolipoprotein d, putative. [B9SBY6, <i>Ricinus communis</i> ]	Vigan.02G265 200	Similar to Uncharacterized protein. [I1LT43, Glycine max]
Vigan.02G26 3600	Similar to Temperature-induced lipocalin. [B6V701, <i>Populus euphratica</i> ]	Vigan.09G111 500	Hypothetical protein
Vigan.02G26 4000	Similar to phosphatidylinositol-glycan biosynthesis class F protein-like isoform X1. [XP_004501099.1, <i>Cicer arietinum</i> ]	Vigan.09G110 100	Non-protein coding gene
Vigan.02G26 4100	Similar to Uncharacterized protein. [V4TVM6, <i>Citrus clementina</i> .]	Vigan.09G110 200	Similar to MATE efflux family protein. [V7AR58, <i>Phaseolus vulgaris</i> ]
Vigan.02G26 4200	Similar to Endopeptidase Clp family protein. [U5FMC5, <i>Populus trichocarpa</i> ]	Vigan.09G110 300	Similar to Uncharacterized protein. [I1JKY2, Glycine max]
Vigan.02G26 4300	Similar to phosphatidylinositol-glycan biosynthesis class F protein-like isoform X3. [XP_004501101.1, <i>Cicer arietinum</i> ]	Vigan.09G110 500	Similar to Non-specific lipid-transfer protein. [Q6WAT9, <i>Vigna radiata</i> ]
Vigan.02G264 800	Non-protein coding gene	Vigan.09G110 600	Similar to Non-specific lipid-transfer protein. [V7AMJ3, <i>Phaseolus vulgaris</i> ]
Vigan.02G263 000	Similar to Uncharacterized protein. [I1JWQ3, Glycine max]	Vigan.09G111 000	Hypothetical protein
Vigan.02G263 400	Similar to trichohyalin-like. [XP_004513530.1, <i>Cicer arietinum</i> ]	Vigan.09G111 100	Similar to Aminotransferase-like isoform 1. [XP_007033542.1, <i>Theobroma cacao</i> ]
Vigan.02G263 700	Similar to Uncharacterized protein. [I1MI15, Glycine max]	Vigan.09G111 200	Similar to Uncharacterized protein. [I1J7P4, Glycine max]
Vigan.02G263 800	Similar to Uncharacterized protein. [I1MI16, Glycine max]	Vigan.09G111 600	Hypothetical protein
Vigan.02G263 900	Similar to phosphatidylinositol-glycan biosynthesis class F protein-like isoform X1. [XP_004501099.1, <i>Cicer arietinum</i> ]	Vigan.09G110 400	Similar to Uncharacterized protein. [I1J7P0, Glycine max]
Vigan.02G264 400	Similar to DNA-directed RNA polymerase. [V7AXH1, <i>Phaseolus vulgaris</i> ]	Vigan.09G111 300	Similar to Uncharacterized protein. [I1LMB5, Glycine max]
Vigan.02G264 500	Similar to Uncharacterized protein. [I1KDE5, Glycine max]	Vigan.09G111 400	Similar to Uncharacterized protein. [I1L710, Glycine max]
Vigan.02G264 600	Similar to Uncharacterized protein. [I1LT42, Glycine max]		