

Table S2. Summary information for 39 mutations in the *Brassica napus* *FAD2.A5* gene identified in this study.

Mutation	Change in property	Mutation	Change in property
<i>A. Conservative Change</i>		<i>C. Possibly hypomorphic</i>	
L151F	hydrophobic to hydrophobic		
L224F	hydrophobic to hydrophobic	P159 L	hydrophilic to hydrophobic
A231V	hydrophobic to hydrophobic	P216L	hydrophilic to hydrophobic
A208V	hydrophobic to hydrophobic	P191L	hydrophilic to hydrophobic
A245V	hydrophobic to hydrophobic	P202L	hydrophilic to hydrophobic
V308I	hydrophobic to hydrophobic	G123D	polar neutral to hydrophilic
A244T	hydrophobic to polar neutral	G257R	polar neutral to hydrophilic
A255T	hydrophobic to polar neutral	G232D	polar neutral to hydrophilic
W190Q	hydrophobic to polar neutral	G200R	polar neutral to hydrophilic
R153K	hydrophilic to hydrophilic	G248R	polar neutral to hydrophilic
D230N	hydrophilic to hydrophilic	S150F	polar neutral to hydrophobic
R242H	hydrophilic to hydrophilic	T297I	polar neutral to hydrophobic
T183M	polar neutral to polar neutral	S199L	polar neutral to hydrophobic
		G232S	polar neutral to hydrophobic
		E152K	-charge to +charge
<i>B. Likely Null</i>		E287K	-charge to +charge
R142Q	In histidine box		
G108S	In histidine box		
V317M	In histidine box		
E106K	In histidine box		
S136F	= <i>Arabidopsis fad2-2</i>		