

SmCOI1	.....MEERN.STRLSSSTNDITVWECVPIYICSRERCAVSL	36
SICOI1	ISYCRRIFFIFSLHLSVQSLSSIFFCNLSIIIVKLIKFWSWSCNLLIVFSICVFLVLVMEERN.STRLSSSTNDITVWECVPIYICSRERCAVSL	99
AaCOI1	.....MCDRTFNSQRLHGMSTVVECVLPYIHESRGRCSLSL	37
VvCOI1	.....MLDMAICRMSTEVINCWVPYIHFDFKRCVAVSL	32
GmCOI1	.....MTEDRNVRKTRVVELVLDGVLPYIIDFKERCAVSO	35
AtCOI1	.....MELPDIKRCCLKSCVATVLDVIEQWYTIIDFKERCSLSL	39
AsCOI1	.....MEESSYKLNKTISSQPSSSSSSSSGTGRYLAWSQVLPYIHFDFKRLCAVSL	51
OsCOI1	.....MGGEVEFEFRLNRALSFDVWVEALHLVWGHVEDFKERCAASR	44
GbCOI1	.....MGSYRLVRGMSDITSEALETVMNYIIDFKERSVVSQ	37
SmCOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRKV	136
SICOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRV	199
AaCOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRV	137
VvCOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRV	132
GmCOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRV	135
AtCOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRV	139
AsCOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRV	151
OsCOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRV	144
GbCOI1	VQRRWWEILAIITREVTIACVTAPEEQISFRFEHIESVKLKGKPIAAMNLIETWGGYVTPVWVEITISFSFKAIHERRMVVLDIETLANRGRV	137
SmCOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	234
SICOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	297
AaCOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	235
VvCOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	230
GmCOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	233
AtCOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	237
AsCOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	249
OsCOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	241
GbCOI1	IQVLIKTKSCGFTDGLIHISRSCKRLRTILMEESYIIEKGEWHELAINNVLENINFYNTLIVQVKA..ETLEIARNCSTISVKIKISECEITNLG	237
SmCOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	333
SICOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	394
AaCOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	322
VvCOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	317
GmCOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	320
AtCOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	327
AsCOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	341
OsCOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	330
GbCOI1	FFRPAVATEEPFGGAFNQLQEDLVAENGYNEQSGKYAAVVEFERICQIG..ITVLCNBNSTLEPFAASRIKLLILYALITTAAPHCLIGRCNEIELEFRN	331
SmCOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	433
SICOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	494
AaCOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	422
VvCOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	417
GmCOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	420
AtCOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	427
AsCOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	441
OsCOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	430
GbCOI1	VVCGIGIVLGCYCQKRLKRLRIFGADITHMEDEEGAVTHRGILIDIAKGCLEIYMAVYVSLITNAEINICTYLRNISCFFIVLDEREHTITLLEFLNG	430
SmCOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	531
SICOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	592
AaCOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	520
VvCOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	515
GmCOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	519
AtCOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	525
AsCOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	539
OsCOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	528
GbCOI1	VRALLRGCHNIRFEALY..VREGGITVGLISYGGYSENVRWMLIGYGESD3ILHFSRGO..STQKLEVRGC..CF:ERALAIAPWLCKIRISRYWVWCGYRA	529
SmCOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	602
SICOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	663
AaCOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	584
VvCOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	585
GmCOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	589
AtCOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	592
AsCOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	612
OsCOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	595
GbCOI1	SSAERDILAMRFWNIELIPARRVVDNDGNG.....ETVVTCHIAHILAYYSLAGQRDCTVVRHIDPTYLLA	596

Supplementary Fig. S3 Amino acid sequence comparison of SmCOI1 with the COI1 proteins from the other plants.

Black highlighted residues indicated identical residues, and pink and blue boxes indicated similar residues. Black boxes indicate amino acid sequences forming α -helices, red lines indicate the amino acid sequences indicate amino acid sequences forming β -folds