

NnAOX1a	1	MMNSK -IAALLLKQLGSATVRTVTMG --- PLNG ----- ITTESSCFLHAS	41
NnAOX1b	1	MMKGSKMVGPLLMQLAPRLFSTATTS --- RLVTSEP -- LLTGTTSTFLYAA	45
AtAOX1a	1	MMITRGGAKAASLLVAAGPRLFSTV --- RTVSSHE -- ALSASHILKPGV	45
LeAOX1a	1	MMTRG -ATRMTRVVMGHMGPYFSTTVLRNNPGTGTVGGVAAGLLHGLPA	49
LeAOX1b	1	MNRNAAM -KISGLLM ----- RQLRGEFLPRGGM --- VQIR --	31
NtAOX1	1	MMTRG -ATRMTRTVLGHMGPYFSTAIFRNDAGTGVMSGAAVF -MHGVPA	48
VuAOX1	1	MMMSRSGGN ----- RVANAV --- MLVAK ---- GLSGE ----- V	26
NnAOX1a	42	GPVVPGRRTWIRFSCS -GV-- RRGSTALNNKEKEKGVRTSSTVGGANR	88
NnAOX1b	46	AARTSVAS -- IRLPVL -GV-- RRGSTGALGGDEQTRNGLQTDSTGGTSDS	90
AtAOX1a	46	TSAWI ---- WTRAPTI -G-GMRFASTITLGEKTPMKEEDANQKKTENEST	89
LeAOX1a	50	NPSEKAVVTWVRHFSAMGS -- RSASTAALNDKQQEKESSDKKVENTATAT	97
LeAOX1b	32	--- H----- WS----- N--- MNTSSKTKEEQKTHNQPSHTDA	57
NtAOX1	49	NPSEKAVVTWVRHFPVMGS -- RSAMSMALNDKQHDK ---- K-AENGSA	91
VuAOX1	27	GGA ----- RAF -Y-GGGVRSESTLVLPKEKMEK ----- KVGDG --	58
NnAOX1a	89	PEDKMI ----- V-SYWG MP PANLT K KDG SEWKWN SFRPWETY KAD LS	129
NnAOX1b	91	PSDKPKPI ----- V-SYWG LV PSKVT K EDG TVWRWN SFRPWETY QAD LS	133
AtAOX1a	90	GGDAAGGNKGDGKIA SYWG VE PNKIT K EDG SEWKWN CFRPWETY KAD IT	139
LeAOX1a	98	AAVNG -GVG --- KSVV SYWG VP PSKAT K PDG TEWKWN CFRPWETY EAD MS	143
LeAOX1b	58	TNAAG -DKAK -- KIV-SYWG VD PPKIS K EDG TPWKWN SFRPWETY SAD IS	103
NtAOX1	92	TGGGDGGDE --- KSVV SYWG VQ PSKVT K EDG TEWKWN CFRPWETY KAD LS	138
VuAOX1	59	----- GNKEQ -KGIV SYWG VE PSKIT K LDG TEWKWN CFRPWETY KAD VS	101
NnAOX1a	130	ID LK KHH SPVT FMDKLAYWTVKALRY PT DIL FQNR YG CRAMMLETVA	179
NnAOX1b	134	ID LK KHH EPNK FL DKMAYWTVKTLRY PT DLF FQRR YG CRAMMLETVA	183
AtAOX1a	140	ID LK KHH VPTT FL DRIAYWTVKSLRW PT DLF FQRR YG CRAMMLETVA	189
LeAOX1a	144	ID LT KHH APVT FL DKFAYWTVKILRF PT DVF FQRR YG CRAMMLETVA	193
LeAOX1b	104	ID VE KHH MPTN FMDKFA YWTVQSLKY PT YLF FQRRHMHAMMLETVA	153
NtAOX1	139	ID LT KHH APTT FL DKFAYWTVKSLRY PT DIF FQRR YG CRAMMLETVA	188
VuAOX1	102	ID LN KHH APTT FL DKMALWTVKTLRY PT DLF FQRR YG CRAMMLETVA	151
NnAOX1a	180	GMV GGMLLH LKSLRRFE HSGGWIK TLL EEAENERMHLMTF MEVSQ PKW YE	229
NnAOX1b	184	GMV AGMLLH CKSLRRFE HSGGWIK ALLE EEAENERMHLMTF MEVSQ PKW YE	233
AtAOX1a	190	GMV GGMLLH CKSLRRFE QSGGWIK ALLE EEAENERMHLMTF MEVAK PKW YE	239
LeAOX1a	194	GMV GGMLLH CKSLRRFE QSGGWIK ALLE EEAENERMHLMTF MEVAK PNW YE	243
LeAOX1b	154	GMV GGMLLH CKSLRRFE HSGGWIK ALLE EEAENERMHLMTF IELSN PKW YE	203
NtAOX1	189	GMV GGMLLH CKSLRRFE QSGGWIK TLL DEEAENERMHLMTF MEVAK PNW YE	238
VuAOX1	152	GMV AGMLLH LKSLRRFE HSGGWIK ALLE EEAENERMHLMTF MEVAK PKW YE	201
NnAOX1a	230	RALV VAVQG VF FNTYF LGYLI SPRFAHR VVGYLEEEA IH SYTEFL KELDK	279
NnAOX1b	234	RALV FTVQG IF FNAYF LAYLI SPKL AHR AVGYLEEEA IH SYTEFL KELDK	283
AtAOX1a	240	RALV ITVQG VF FNAYF LGYLI SPKF AHR MVGYLEEEA IH SYTEFL KELDK	289
LeAOX1a	244	RALV FAVQG VF FNAYFAAYLI SPKL AHR IVGYLEEEA VH SYTEFL KELDN	293
LeAOX1b	204	RALV FAVQG VFNAYF IAYLA SPKL AHR IVGYLEEEA VN SYTEFL IDIEK	253
NtAOX1	239	RALV FAVQG VF FNAYF VTYLL SPKL AHR IVGYLEEEA IH SYTEFL KELDK	288
VuAOX1	202	RALV ITVQG VF FNAYF LGYMI SPKF AHR MVGYLEEEA IH SYTEFL KELDK	251
NnAOX1a	280	GNIQNV PAPAIA VDYWQLP PDS TLRD VV MVV RADEAHRD VNH FASDI HD	329
NnAOX1b	284	GNIENV PAPAIA IDYWHLP PDS TLRD VV LAV RADEAHRD VNH FASDI HF	333
AtAOX1a	290	GNIENV PAPAIA IDYWRLP ADA TLRD VV MVV RADEAHRD VNH FASDI HY	339
LeAOX1a	294	GNIENV PAPAIA IDYWRLP KDA TLRD VV LVV RADEAHRD VNH YASDI HY	343
LeAOX1b	254	GLFEN SPAPAIA IDYWRLP ADA TL KD VV TVI RADEAHRD LNH FASDI QC	303
NtAOX1	289	GNIENV PAPAIA IDYCRLP KDS TLRD VV LVV RADEAHRD VNH FASDI HY	338
VuAOX1	252	GNIENV PAPAIA IDYWQLP PDS TLRD VV TVV RADEAHRD VNH FASDI HY	301
NnAOX1a	330	QG YEL KESP AP LGYH	344
NnAOX1b	334	QG QEL REIP AP LGYH	348
AtAOX1a	340	QG REL KEAP AP LGYH	354
LeAOX1a	344	QG QQL KDSP AP LGYH	358
LeAOX1b	304	QG HEL KGYP AP LGYH	318
NtAOX1	339	QG QQL KDSP AP LGYH	353
VuAOX1	302	QG REL REAA AP LGYH	316

Supplemental Figure S1. Sequence alignment of NnAOX1a, NnAOX1b and AOX1 proteins from other dicot species. Bold characters highlight residues conserved across all of the AOX sequences in the alignment. The putative structural features are shown as described in the legend of Fig. 3. Abbreviations and data sources: AtAOX1a, *Arabidopsis thaliana* AOX1a (NP_188876); LeAOX1a, *Lycopersicon esculentum* AOX1a (AAK58482); LeAOX1b, *L. esculentum* AOX1b (AAK58483); NtAOX1, *Nicotiana tabacum* AOX1 (AAC60576); VuAOX1, *Vigna unguiculata* AOX1 (AAZ09196).