

Table S1. List of AGOs used in this study.

(‘√’ = species where accession numbers were freshly annotation as AGOs. Sequences corresponding to these accession numbers were earlier not annotated as AGOs in the respective DB).

Species	Accession No.	Argonautes	Source	Status
<i>Arabidopsis lyrata</i>	EFH41660.1 EFH48230.1 EFH50287.1 EFH57134.1 EFH57221.1 EFH57513.1 EFH64977.1 EFH70108.1 EFH70109.1 EFH70370.1	AlAGO10 AlAGO9 AlAGO8 AlAGO4 AlAGO5 AlAGO6 AlAGO7 AlAGO3 AlAGO2 AlAGO1	NCBI	
<i>Arabidopsis thaliana</i>	AAF79718.1 At1g48410 At1g31280 At1g31290 At2g27040 At2g27880 At2g32940 At1g69440 At5g21030 At5g21150 At5g43810	AtAGOLike AtAGO1 AtAGO2 AtAGO3 AtAGO4 AtAGO5 AtAGO6 AtAGO7 AtAGO8 AtAGO9 AtAGO10	NCBI / TAIR	
<i>Brachypodium distachyon</i>	XP_003559290.1 XP_003559577.1 XP_003559728.1 XP_003560234.1 XP_003560616.1 XP_003561331.1 XP_003563234.1 XP_003567034.1 XP_003567769.1 XP_003570049.1 XP_003573171.1 XP_003576965.1 XP_003580340.1 XP_003581669.1	BdMEL1like BdAGO12like BdAGO7like BdAGO18like BdPNH1like BdMELlike BdAGO1Dlike BdAGO4Alike BdAGO4Blike BdAGO1Alike BdAGO1Clike BdAGO16like BdAGO1Blike BdAGO2like	NCBI	
<i>Brassica rapa</i>	Bra040815 Bra020152 Bra002360 Bra002361 Bra033698 Bra003999 Bra011993 Bra032254 Bra034318 Bra023172 Bra022918	BrAGO2b BrAGO9a BrAGO9c BrAGO9b BrAGO10 BrAGO7 BrAGO5 BrAGO1 BrAGO4 BrAGO2a BrAGO6	Phytozome	√
<i>Carica papaya</i>	evm.model.supercontig_1.68	CpAGO7	Phytozome	√

	evm.model.supercontig_135.40 evm.model.supercontig_26.59 evm.model.supercontig_44.130 evm.model.supercontig_47.31 evm.model.supercontig_600.1 evm.model.supercontig_75.90	CpAGO2 CpAGO4 CpAGO10 CpAGO5 CpAGO6 CpAGO1		
<i>Capsella rubella</i>	Carubv10008180m Carubv10008158m Carubv10010881m Carubv10022614m Carubv10025461m Carubv10022599m Carubv10019715m Carubv10002706m Carubv10000166m Carubv10025804m	CrbAGO2 CrbAGO1 CrbAGO3 CrbAGO6 CrbAGO5 CrbAGO4 CrbAGO7 CrbAGO8 CrbAGO9 CrbAGO10	Phytozome	√
<i>Chlamydomonas reinhardtii</i>	EDO99352.1 EDP01992.1 EDP01993.1 EDO99188.1	CrnAGOlike CrnAGO2like CrnAGO2 CrnAGO6	NCBI	
<i>Citrus sinensis</i>	orange1.1g002636m orange1.1g003630m orange1.1g001684m orange1.1g001954m orange1.1g002661m orange1.1g002449m orange1.1g001466m orange1.1g002204m	CsnAGO9 CsnAGO5 CsnAGO7 CsnAGO10 CsnAGO6 CsnAGO4 CsnAGO1 CsnAGOlike	Phytozome	√
<i>Cucumis sativus</i>	Cucsa.082260.1 Cucsa.112480.1 Cucsa.152920.1	CstAGO1b CstAGO1a CstAGO4	Phytozome	√
<i>Eucalyptus grandis</i>	Eucgr.B03780.1 Eucgr.G02476.1 Eucgr.H00532.1 Eucgr.H00615.1 Eucgr.J00634.1 Eucgr.J00634.2 Eucgr.K02304.1	EgAGO4a EgAGO7 EgAGO10a EgAGO10b EgAGO4c EgAGO4b EgAGO1	Phytozome	√
<i>Glycine max</i>	CAW52557.1 CAW52604.1 XP_003516290.1 XP_003519489.1 XP_003524004.1 XP_003526363.1 XP_003536500.1 XP_003540778.1 XP_003541581.1 XP_003547312.1 XP_003550835.1 XP_003556681.1	GmAGOlike1 GmAGOlike2 GmAGO7like GmAGO4like GmPNH1like1 GmAGO4Blike GmAGO10like GmAGO5like2 GmAGO16like GmAGO2like1 GmPNH1like2 GmAGO2like2	NCBI	
<i>Hordeum vulgare</i>	BAK05938.1 BAK06654.1 BAJ95476.1 BAJ99496.1	HvAGO5 HvAGO1b HvAGO3 HvAGO1a	NCBI	

	BAK04309.1	HvAGO10		
<i>Lotus japonicus</i>	ACN79520.1	LjAGO7	NCBI	
<i>Linum usitatissimum</i>	Lus10025537 Lus10006627 Lus10017983 Lus10015155 Lus10031331 Lus10037136 Lus10041978 Lus10035331 Lus10026750	LuAGO4b LuAGO10a LuAGO1 LuAGO9 LuAGO10b LuAGO7 LuAGO5 LuAGO6 LuAGO4a	Phytozome	√
<i>Manihot esculenta</i>	cassava4.1_000932m cassava4.1_000845m cassava4.1_000940m cassava4.1_001305m cassava4.1_000956m cassava4.1_000826m cassava4.1_028612m	MeAGO10 MeAGO7b MeAGO5 MeAGO4 MeAGOlike MeAGO7a MeAGO1	Phytozome	√
<i>Malus domestica</i>	MDP0000161046 MDP0000118779 MDP0000215105 MDP0000071268 MDP0000159246 MDP0000069525 MDP0000209079 MDP0000774227 MDP0000232035 MDP0000199819 MDP0000191579	MdAGO10c MdAGO7a MdAGO9 MdAGO10a MdAGO7b MdAGO1a MdAGO4 MdAGO5b MdAGO5a MdAGO1b MdAGO10b	Phytozome	√
<i>Medicago truncatula</i>	AES62761.1 AES64710.1 AES68604.1 AES71838.1 AES90053.1 AES91411.1 AES96874.1 AET00054.1 AET00055.1 AET00057.1	MtAGO4a MtAGO2 MtAGO4e MtAGO6 MtAGO3 MtAGO10 MtAGO7 MtAGO4b MtAGO4c MtAGO4d	NCBI	
<i>Mimulus guttatus</i>	mgv1a001065m mgv1a000944m mgv1a000822m mgv1a000922m mgv1a001365m mgv1a000545m mgv1a001084m	MgAGO6 MgAGO4 MgAGO5 MgAGO10 MgAGO7 MgAGO1 MgAGO9	Phytozome	√
<i>Nicotiana attenuata</i>	GBGF01000001.1 GBGF01000002.1 GBGF01000003.1 GBGF01000004.1 GBGF01000005.1 GBGF01000006.1 GBGF01000007.1 GBGF01000008.1	NaAGO1a NaAGO1b NaAGO1c NaAGO2 NaAGO4a NaAGO4b NaAGO5 NaAGO7	GenBank	√

	GBGF01000009.1 GBGF01000010.1 GBGF01000011.1	NaAGO8 NaAGO9 NaAGO10		
<i>Nicotiana benthamiana</i>	ABC61503.1 ABC61504.1 ABC61505.1 BAJ09698.1	NbAGO4-2 NbAGO4-1 NbAGO1-2 NbAGO1-1	NCBI	
<i>Nicotiana tabacum</i>	ABC61502.1	NtAGO1	NCBI	
<i>Oryza sativa</i>	LOC_Os02g45070.1 LOC_Os04g47870.1 LOC_Os02g58490.1 LOC_Os06g51310.2 LOC_Os04g52540.1 LOC_Os04g52550.1 LOC_Os01g16870.3 LOC_Os04g06770.2 LOC_Os07g09020.1 LOC_Os03g58600.1 LOC_Os03g57560.1 LOC_Os03g33650.1 LOC_Os06g39640.1 LOC_Os02g07310.1 LOC_Os03g47820.1 LOC_Os03g47830.1 LOC_Os07g28850.1	OsAGO1A OsAGO1B OsAGO1C OsAGO1D OsAGO2 OsAGO3 OsAGO4A OsAGO4B OsAGO14 OsMLE1 OsAGO13 OsSHL4 OsPNH1 OsAGO17 OsAGO12 OsAGO11 OsAGO18	TIGR	
<i>Pelargonium hortorum</i>	ACZ04920.1	PhAGO4like	NCBI	
<i>Physcomitrella patens</i>	EDQ50204.1 EDQ61013.1 EDQ66080.1 EDQ77668.1 EDQ79477.1 EDQ82032.1	PptAGOlke1 PptAGO5 PptAGOlke2 PptAGO1 PptAGOlke3 PptAGO10	NCBI	
<i>Phaseolus vulgaris</i>	Phvulv091017154m Phvulv091002019m Phvulv091006909m Phvulv091010302m Phvulv091023278m Phvulv091011331m	PvAGO10b PvAGO7 PvAGO4 PvAGO9 PvAGO10a PvAGO1	Phytozome	√
<i>Picea glauca</i>	AAAY67884.1	PgAGO	NCBI	
<i>Pisum sativum</i>	ABL63483.1 ABL63484.1	PsAGO2 PsAGO1	NCBI	
<i>Populus trichocarpa</i>	EEE72070.1 EEE82967.1 EEE88272.1 EEE88323.1 EEE89922.1 EEE92366.1 EEE96558.1 EEE98804.1 EEF02279.1	PtAGOlke1 PtAGOlke2 PtAGOlke3 PtAGO4a PtAGO10 PtAGO4b PtAGO1 PtAGO6 PtAGO7	NCBI	
<i>Prunus persica</i>	ppa000990m ppa024131m ppa000759m ppa000547m	PprAGO4a PprAGO5 PprAGO7 PprAGO1b	Phytozome	√

	ppa000619m ppa017623m ppa000823m	PprAGO1a PprAGO4b PprAGO10		
<i>Ricinus communis</i>	27389.m000069 29589.m001295 29677.m000188 29684.m000322 29807.m000479 29813.m001544 29828.m000386 29844.m003212	RcAGO6 RcAGO5 RcAGO1 RcAGO4a RcAGO10b RcAGO7 RcAGO4b RcAGO10a	Phytozome	√
<i>Selaginella moellendorffii</i>	EFJ14095.1 EFJ14096.1 EFJ24991.1	SmAGO10 SmAGO1a SmAGO1b	NCBI	
<i>Solanum lycopersicum</i>	SISBM_S02331_01.70 SISBM_S01043_02.10 SISBM_S01043_02.20 SISBM_S01043_02.30 SISBM_S00897_03.10	SIAGO4b SIAGOlike1 SIAGOlike2 SIAGOlike3 SIAGO4a	Tomato SBM database	√
<i>Sorghum bicolor</i>	EER88597.1 EER89008.1 EER92100.1 EES07823.1 EES12675.1 EES18816.1 EES18841.1	SbAGO10a SbAGO1b SbAGO7 SbAGO1a SbAGO10b SbAGO4 SbAGO10c	NCBI	
<i>Thellungiella halophila</i>	Thhalv10016181m Thhalv10016224m Thhalv10011196m Thhalv10006643m Thhalv10018068m Thhalv10001902m Thhalv10015501m Thhalv10012624m Thhalv10003139m	ThAGO5 ThAGO6 ThAGO1 ThAGO2 ThAGO7 ThAGO4 ThAGO8 ThAGO9 ThAGO10	Phytozome	√
<i>Vitis vinifera</i>	XP_002279408.1 XP_002275928.1 XP_002281687.1 XP_002267746.1 XP_002264978.1 XP_002271225.1 XP_002271699.2 XP_002264527.2 XP_002274220.2 XP_002271447.2 XP_003634638.1	VvAGO10like VvAGO4 VvPNH1 VvAGO7like VvAGO4Alike VvAGO1like VvAGO5like VvMEL1like VvAGO2like VvAGO16like VvAGO1Blike	NCBI	
<i>Volvox carteri</i>	EFJ46144.1	VcAGOlike	NCBI	
<i>Zea mays</i>	GRMZM2G441583_T01 GRMZM2G079080_T02 AC189879.3_FGT003 GRMZM2G039455_T01 GRMZM2G589579_T01 AC209206.3_FGT011 GRMZM2G361518_T01	ZmAGO1b ZmAGO10a ZmAGO10b ZmAGO1a ZmAGO4 ZmAGO1c ZmAGO1d	Phytozome	√

<i>Kluyveromyces polysporus</i>	4F1N_A	YeastAGO	PDB	
<i>Tribolium castaneum</i>	XP_971295.2 EFA02921.1 EFA04626.1 EFA09197.1 EFA11590.1	TcAGO1b TcAGO3 TcAGO2b TcAGO1a TcAGO2a	NCBI	
<i>Homo sapiens</i>	4F3T_A	HsAGO2	PDB	
<i>Aedes aegypti</i>	ACR56327.1	AaAGO2	NCBI	
<i>Amphimedon queenslandica</i>	XP_003385988.1 XP_003382578.1	AqAGO2like1 AqAGO2like2	NCBI NCBI	
<i>Anopheles darlingi</i>	ETN67307.1	AdAGO2	NCBI	
<i>Bombyx mori</i>	BAF73719.1 BAD91160.2	BmoAGO1 BmoAGO2	NCBI	
<i>Bos taurus</i>	AAS21301.1	BtAGO2	NCBI	
<i>Brugia malayi</i>	XP_001894256.1	BmaAGO2	NCBI	
<i>Crassostrea gigas</i>	EKC19600.1	CgAGO2	NCBI	
<i>Danaus plexippus</i>	EHJ71131.1	DpAGO1	NCBI	
<i>Danio rerio</i>	AFU66008.1	DrAGO2	NCBI	
<i>Drosophila immigrans</i>	AHZ92157.1	DiAGO2	NCBI	
<i>Drosophila melanogaster</i>	AAF58313.1 AAF49619.2	DmAGO1 DmAGO2	NCBI NCBI	
<i>Drosophila santomea</i>	ABB54736.1	DsAGO2	NCBI	
<i>Ephydatia fluviatilis</i>	BAJ07611.1	EfAGO	NCBI	
<i>Hydra vulgaris</i>	XP_002160880.2	HyvAGO2like	NCBI	
<i>Isodiametrica pulchra</i>	CAQ03960.1	IpPIWIlike2	NCBI	
<i>Marsupenaeus japonicus</i>	BAM37459.1	MjAGO2	NCBI	
<i>Musca domestica</i>	XP_005175308.1	MudAGO1like	NCBI	
<i>Nilaparvata lugens</i>	AGH30326.1 AGE12619.1	NIAGO1 NIAGO2	NCBI	
<i>Nematostella vectensis</i>	AGW15594.1 AGW15595.1	NvAGO1 NvAGO2	NCBI	
<i>Oikopleura dioica</i>	CAP07637.1	OdAGO2	NCBI	
<i>Sarcophilus harrisii</i>	XP_003760467.1	ShAGO2	NCBI	
<i>Spodoptera litura</i>	AHC98009.1 AHC98010.1	SplAGO1 SplAGO2	NCBI	
<i>Strongylocentrotus purpuratus</i>	ACE63524.1	SpAGO1	NCBI	
<i>Sus scrofa</i>	ADH59736.1	SsAGO2	NCBI	
<i>Trichuris trichiura</i>	CDW54952.1	TtAGO2	NCBI	
<i>Xenopus laevis</i>	ACA52290.1	XlAGO2	NCBI	