

# S1 Fig

MLO1 ALPO	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRNKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 LUPA	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRNKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 orientalis	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRNKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 REDBERRY	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRNKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 tomentosus	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRKRKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 odemensis ILL235	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 odemensis ILL39	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 lamotei	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 ervoides	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
MLO1 nigricans	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICISQKVGSTWHPCSTPKTTETKSDESFDNETN - DRKL	120
PsMLO1 AC007297.1	1	MAEGGVVKERTLEETPTWAVAVVCLVLLAVSILIEHTI HVIGKWLKKRKNALYEALEKIKGELMLLGFI SLLLTVFQDNISEICVSQKIGSTWHPCSTSNTKAKAKSDESLDYKTNNDRKL	121
MtMLO1 Medtr6g033330.1	1	MAEDKVYERTELLEETPTWAVAVVCFVLLAISIVIEHI IHAIGKWFKKKKRNKNALYEALEKEVKGELMIMGFISLLLTVFQDQYISKICISEKVGSTWHPCSTPKTKTAS - NDENSESENH - DRKL	119
CaMLO2 XP_004515994.1	1	MAAO - VYERTELLEETPTWAVAVVCFVLLAISIVIEHI IHVIGKWLKKHHKNGLYEAEKVKAEMLLGFI SLLLTVFQDPIISKICISQKVGSTWHPCSNPNNKKS - N - ETSENENNDRKL	118
MLO1 ALPO	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 LUPA	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 orientalis	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 REDBERRY	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 tomentosus	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 odemensis ILL235	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 odemensis ILL39	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 lamotei	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 ervoides	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
MLO1 nigricans	121	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	241
PsMLO1 AC007297.1	122	L EYFDPI PRRILATKGYDKCFEKQVALVSAYGIHQLHIFIVFLAIFHILQCIITLTGLRIKMRKWKTWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	242
MtMLO1 Medtr6g033330.1	120	L EYFDPI PRRILATKGYDKCQADKGKVALVSAYGIHELHVIFVLAIFHILQCIITLALGRFKMRWRWKWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	240
CaMLO2 XP_004515994.1	119	L EYFDPI PRRILATKGYDKCQADKGKVALVSAYGIHELHVIFVLAIFHILQCIITLALGRFKMRWRWKWEDETRTVEYQFYNDPERFRFARDTTFGRRHL SMWTQSPILLWIVSFRRQFFF	239
MLO1 ALPO	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 LUPA	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 orientalis	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 REDBERRY	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 tomentosus	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 odemensis ILL235	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 odemensis ILL39	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 lamotei	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 ervoides	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
MLO1 nigricans	242	S INRVDYMAL RHGFIMAHLAPGNDQAQDFQKYISRSIEEDFKVVVGISPITIWLFTVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPLVEPGDHLFWFN	362
PsMLO1 AC007297.1	243	S ISRVDYLAL RHGFIMAHLAPGNDAEQDFQKYISRSLEKDFKVVVGISPITIWFFAVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPVVEPGDHLFWFN	363
MtMLO1 Medtr6g033330.1	241	S ISRVDYLAL RHGFIMAHLAPGNDAEQDFQKYISRSLEKDFKVVVGISPITIWFFAVLFLLTNTHGWSYYWLPLFLPIIILVGAKLQMIITKMGLRIQDRGEVIKGAPVVEPGDHLFWFN	361
CaMLO2 XP_004515994.1	240	S INKVDYLAL RHGFVMAHLAPGNDAEQDFQKYISRSLEKDFKVVVGISPITIWFFAVLFLLTNTHGWSHYWLPLFLPIIILVGAKLQMIITKMGLRIQDSGEIKGAPLVEPGDHLFWFN	360
MLO1 ALPO	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 LUPA	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 orientalis	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 REDBERRY	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 tomentosus	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 odemensis ILL235	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 odemensis ILL39	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 lamotei	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 ervoides	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
MLO1 nigricans	363	RPRLLLFTIHLVLFQNAFQLAFFWVSTYEFITSCHFKTTADTVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNGRVATAKQKVQSKHSNNNTPNSSSQPSTPTHT	483
PsMLO1 AC007297.1	364	RPHLLLFTIHLVLFQNAFQLAFFWSTYEFITSCHFKTTADSVIRTVGVLIQILCSYVTLPLYALVTQMGSTMKPTIFNERVATAKQKVQSKHSNNNTPYSSRPSTPTHT	484
MtMLO1 Medtr6g033330.1	362	SPNLLFIIHLVLFQNAFQLAFFSWSTYEFISNSCFHRTTADNVIRVSVGLIQLFCSYVTLPLYALVTQMGSTMKPTIFNERLATALKWHTAKQKVQSKHSNNNTPYSSRPSTPTHG	482
CaMLO2 XP_004515994.1	361	RPDLFFFIIHLVLFQNAFQLAFFSWSTYEFISNSCFHRTTADNVIRVSVGLIQLFCSYVTLPLYALVTQMGSTMKPTIFNERLATALKWHTAKQKVQSKHSNNNTPYSSRPSTPTHG	481
1			
MLO1 ALPO	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 LUPA	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 orientalis	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 REDBERRY	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 tomentosus	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 odemensis ILL235	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 odemensis ILL39	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 lamotei	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 ervoides	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEGDGSTSPRNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
MLO1 nigricans	484	MSPVHLLHRHTAGNSDSPQTSPKKSNNYKNEQWDIEEGEGSTSFRPNQNTGQNEIQIAGVESFSLAELPVIRHEI--SSGSKDFSFKEKRHIGRERLEL*	578
PsMLO1 AC007297.1	485	MSPVHLLHRHTAGNSDSLQTSFEKSDYKNEQWDIEEGEPSTSRLNDQTCGHEIQIAGVESFSSTELPVIRHES-TSGSKDFSFKEKRHLSGN-----	574
MtMLO1 Medtr6g033330.1	483	MSPVHLLHRQTFGNSDLQTSRPTSNYE NEQWDVEGGGSTSPRNQNTVASEIEIPIMESFSTELPVSVRHEIGTISSSSKDFSFKEKRHIGSN-----	575
CaMLO2 XP_004515994.1	482	MSPVHLLHRHTVSSSDLQTS---NYEQWDV-VEGGGSTSPRNQNTVASEIEIPIMESFSTELPVSVRHEIIP-----TELPVSNRHEIISSSSKDFSFKEKRIVVSD-----	559