

Supplementary Table 2. The 54 7TMpR candidates identified by Moriyama, Strope, Opiyo, Chen, and Jones¹

Group	ID	Length	Description
[Multiple members from a big gene family (>5 members)]			
Nodulin MtN3 family	At1g21460.1	247	68414.m02683 nodulin MtN3 family protein contains similarity to MTN3 (nodule development protein) GB:Y08726 GI:1619601 from [Medicago truncatula]
	At3g16690.1	230	68416.m02132 nodulin MtN3 family protein contains Pfam PF03083 MtN3/saliva family
	At3g28007.1	251	68416.m03496 nodulin MtN3 family protein contains Pfam PF03083 MtN3/saliva family; similar to LIM7 GI:431154 (induced in meiotic prophase in lily microsporocytes) from [Lilium longiflorum]
	At3g48740.1	289	68416.m05322 nodulin MtN3 family protein similar to MtN3 GI:1619602 (root nodule development) from [Medicago truncatula]
	At4g25010.1	281	68417.m03588 nodulin MtN3 family protein similar to MtN3 GI:1619602 (root nodule development) from [Medicago truncatula]
	At5g13170.1	292	"68418.m01508 nodulin MtN3 family protein similar to MtN3 GI:1619602 (root nodule development) from [Medicago truncatula]; identical to cDNA senescence-associated protein (SAG29) mRNA, partial cds GI:4426938"
	At5g23660.1	285	68418.m02774 nodulin MtN3 family protein similar to MtN3 GI:1619602 (root nodule development) from [Medicago truncatula]
	At5g50800.1	294	68418.m06293 nodulin MtN3 family protein similar to MtN3 GI:1619602 (root nodule development) from [Medicago truncatula]
	MLO family	<i>At1g11000.1</i>	573
<i>At1g26700.1</i>		554	"68414.m03252 seven transmembrane MLO family protein / MLO-like protein 14 (MLO14) identical to membrane protein Mlo14 [Arabidopsis thaliana] gi 14091598 gb AAK53807; similar to MLO protein SWISS-PROT:P93766, NCBI_gi:1877221 [Hordeum vulgare][Barley]"
<i>At1g42560.1</i>		467	"68414.m04907 seven transmembrane MLO family protein / MLO-like protein 9 (MLO9) nearly identical to membrane protein Mlo9 [Arabidopsis thaliana] GI:14091588; similar to MLO protein SWISS-PROT:P93766, NCBI_gi:1877221 [Hordeum vulgare][Barley]"
<i>At2g33670.1</i>		501	"68415.m04126 seven transmembrane MLO family protein / MLO-like protein 5 (MLO5) identical to MLO-like protein 5 (AtMlo5) [Arabidopsis thaliana] SWISS-PROT:O22815; similar to MLO protein SWISS-PROT:P93766, NCBI_gi:1877221 [Hordeum vulgare][Barley]"
<i>At2g44110.1</i>		496	"68415.m05485 seven transmembrane MLO family protein / MLO-like protein 15 (MLO15) identical to MLO-like protein 15 (AtMlo15) SP:O80580 from [Arabidopsis thaliana]; similar to MLO protein SWISS-PROT:P93766, NCBI_gi:1877221 [Hordeum vulgare][Barley]"
<i>At4g24250.1</i>		478	"68417.m03480 seven transmembrane MLO family protein / MLO-like protein 13 (MLO13) identical to membrane protein Mlo13 [Arabidopsis thaliana] gi 14091596 gb AAK53806; similar to MLO protein SWISS-PROT:P93766, NCBI_gi:1877221 [Hordeum vulgare][Barley]"
<i>At5g53760.1</i>		573	"68418.m06680 seven transmembrane MLO family protein / MLO-like protein 11 (MLO11) identical to membrane protein Mlo11 [Arabidopsis thaliana] gi 14091592 gb AAK53804; similar to MLO protein SWISS-PROT:P93766, NCBI_gi:1877221 [Hordeum vulgare][Barley]"
Expressed protein family 1	At1g77220.1	484	68414.m08994 expressed protein contains Pfam profile PF03619: Domain of unknown function
	At4g21570.1	294	68417.m03120 expressed protein contains Pfam profile PF03619: Domain of unknown function
[Multiple members from a small gene family]			
TOM3 family	At1g14530.1	293	"68414.m01723 tobamovirus multiplication protein 3, putative / TOM3, putative (THH1) identical to THH1 (GI:15706301) [Arabidopsis thaliana]; supporting cDNA gi 15706300 dbj AB057678.1"
	At2g02180.1	303	68415.m00154 tobamovirus multiplication protein 3 (TOM3) identical to tobamovirus multiplication protein (TOM3) GI:15425641 from [Arabidopsis thaliana]
	At4g21790.1	291	68417.m03152 transmembrane protein-related (TOM1) contains some similarity to transmembrane protein TOM3 GI:15425641 from [Arabidopsis thaliana]; identical to cDNA TOM1 GI:9967414
GNS1/SUR4 membrane family	At1g75000.1	281	68414.m08707 GNS1/SUR4 membrane family protein contains Pfam profile PF01151: GNS1/SUR4 family
	At3g06470.1	278	68416.m00749 GNS1/SUR4 membrane family protein similar to SP P39540 Elongation of fatty acids protein 1 {Saccharomyces cerevisiae}; contains Pfam profile PF01151: GNS1/SUR4 family
	At4g36830.1	289	68417.m05223 GNS1/SUR4 membrane family protein weak similarity to long chain polyunsaturated fatty acid elongation enzyme [Isochrysis galbana] GI:17226123; contains Pfam profile PF01151: GNS1/SUR4 family

Expressed protein family 2	At1g10660.1	320	68414.m01208 expressed protein
	At2g47115.1	300	68415.m05884 expressed protein
	At5g62960.1	347	68418.m07899 expressed protein
Per1-like family	At1g16560.1	342	68414.m01983 Per1-like family protein contains Pfam profile PF04080: Per1-like
	At5g62130.1	343	68418.m07798 Per1-like protein-related
Expressed protein family 3	At3g09570.1	439	68416.m01137 expressed protein
	At5g42090.1	439	68418.m05124 expressed protein
Expressed protein family 4	At1g49470.1	302	68414.m05544 expressed protein contains Pfam profile PF04819: Family of unknown function (DUF716) (Plant viral-response family)
	At5g19870.1	276	68418.m02363 expressed protein contains Pfam profile PF04819: Family of unknown function (DUF716) (Plant viral-response family)
Expressed protein family 5	At3g63310.1	239	68416.m07121 expressed protein low similarity to N-methyl-D-aspartate receptor-associated protein [Drosophila melanogaster] GI:567104; contains Pfam profile PF01027: Uncharacterized protein family UPF0005
	At4g02690.1	248	"68417.m00364 hypothetical protein low similarity to N-methyl-D-aspartate receptor-associated protein [Drosophila melanogaster] GI:567104, NMDA receptor glutamate-binding subunit [Rattus sp.] GI:8248741; contains Pfam profile PF01027: Uncharacterized prote"
[Single copy genes]			
GCR1	<i>At1g48270.1</i>	326	68414.m05392 G protein coupled receptor-related identical to putative G protein coupled receptor GI:2104224 from [Arabidopsis thaliana]
	At1g57680.1	362	68414.m06545 expressed protein
	At2g41610.1	310	68415.m05142 expressed protein
	At2g31440.1	250	68415.m03841 expressed protein identical to cDNA endonuclease III homologue (nth1 gene) GI:11181951
	At3g04970.1	397	68416.m00540 zinc finger (DHHC type) family protein similar to Golgi-specific DHHC zinc finger protein [Mus musculus] GI:21728103; contains Pfam profile PF01529: DHHC zinc finger domain
RGS1	<i>At3g26090.1</i>	459	68416.m03249 expressed protein
	At3g59090.1	367	68416.m06587 expressed protein
	At4g20310.1	513	68417.m02966 peptidase M50 family protein / sterol-regulatory element binding protein (SREBP) site 2 protease family protein weak similarity to SP O54862 Membrane-bound transcription factor site 2 protease (EC 3.4.24.-) (Sterol-regulatory element-binding
[Single member from a small gene family]			
	At2g01070.1	496	68415.m00013 expressed protein similar to membrane protein PTM1 precursor isolog GB:AAB65479
	At3g19260.1	296	68416.m02443 longevity-assurance (LAG1) family protein similar to Alternaria stem canker resistance protein (ASC1) [Lycopersicon esculentum] GI:7688742; contains Pfam profile PF03798: Longevity-assurance protein (LAG1)
	At2g35710.1	497	68415.m04380 glycogenin glucosyltransferase (glycogenin)-related low similarity to glycogenin-2 from Homo sapiens [SP O15488]
	At2g16970.1	414	68415.m01955 expressed protein ; expression supported by MPSS
	At1g15620.1	343	68414.m01877 expressed protein ; expression supported by MPSS
	At1g63110.2	397	68414.m07132 cell division cycle protein-related contains 9 transmembrane domains; similar to PIG-U (GI:27372215) [Rattus norvegicus]; similar to Cell division cycle protein 91-like 1 (CDC91-like 1 protein) (PIG-U) (Swiss-Prot:Q9H490) [Homo sapiens]
	At4g36850.1	374	68417.m05225 PQ-loop repeat family protein / transmembrane family protein similar to SP Q10482 Seven transmembrane protein 1 {Schizosaccharomyces pombe}; contains Pfam profile PF04193: PQ loop repeat
	At5g27210.1	297	68418.m03246 expressed protein weak similarity to seven transmembrane domain orphan receptor [Mus musculus] GI:4321619
[Single member from a large gene family]			
	At1g71960.1	662	68414.m08318 ABC transporter family protein similar to breast cancer resistance protein GB:AAC97367 from [Homo sapiens]
	At3g01550.1	383	"68416.m00085 triose phosphate/phosphate translocator, putative similar to SWISS-PROT:P52178 triose phosphate/phosphate translocator [Cauliflower]{Brassica oleracea}"
	At5g23990.1	657	"68418.m02819 ferric-chelate reductase, putative similar to ferric-chelate reductase (FRO1) [Pisum sativum] GI:15341529; contains Pfam profile PF01794: Ferric reductase like transmembrane component"
	At5g37310.1	564	"68418.m04481 endomembrane protein 70, putative multispinning membrane protein, Homo sapiens, EMBL:HSU94831"

¹7TMpR candidates were grouped based on their BLASTP E-values of 10⁻²⁰ or better. Sequence IDs of nine previously reported 7TMpRs including 7 MLOs, GCR1, and RGS1 are shown in boldface and italic.