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Supplementary Material

Transcriptome-wide development and utilisation of novel intron-length polymorphic markers in common vetch (*Vicia sativa* subsp. *sativa*)

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Table S1. List of common vetch accessions used for genetic diversity analysis in this study

Serial no.	Name	PI Number	Species	Country of origin	Type
1	TYESSISKAYA	PI 263181	<i>Vicia sativa</i> L.	Former Soviet Union	Cultivar
2	VILKOVISHSKAYA	PI 263187	<i>Vicia sativa</i> L.	Former Soviet Union	Cultivar
3	BELOCERKOVSKAJA 199	PI 406328	<i>Vicia sativa</i> L.	Former Soviet Union	Cultivar
4	STANISLAVSKAYA	PI 263182	<i>Vicia sativa</i> L.	Former Soviet Union	Cultivar
5	KOMARICHSKAYA	PI 263180	<i>Vicia sativa</i> L.	Former Soviet Union	Cultivar
6	BLANCHEGRAIN	PI 293298	<i>Vicia sativa</i> L.	France	Cultivar
7	CAROLE	PI 628305	<i>Vicia sativa</i> L.	France	Cultivar
8	CAROLINE	PI 628306	<i>Vicia sativa</i> L.	France	Cultivar
9	SEPTIMANE	PI 293300	<i>Vicia sativa</i> L.	France	Cultivar
10	BLANCHEFLEUR	PI 413768	<i>Vicia sativa</i> L.	France	Cultivar
11	WARRIOR	PI 599337	<i>Vicia sativa</i> L.	United States	Cultivar
12	NOVA II	PI 600820	<i>Vicia sativa</i> L.	United States	Cultivar
13	VANGUARD	PI 600821	<i>Vicia sativa</i> L.	United States	Cultivar
14	CAHABA WHITE	PI 600818	<i>Vicia sativa</i> L.	United States	Cultivar
15	CHARKOVSKAJA N.134	PI 289495	<i>Vicia sativa</i> L.	Hungary	Cultivar
16	OSZTRAK TAJFAJTA	PI 289503	<i>Vicia sativa</i> L.	Hungary	Cultivar
17	STRZELECHE RDZOWA	PI 289513	<i>Vicia sativa</i> L.	Hungary	Cultivar
18	RUGENER	PI 289499	<i>Vicia sativa</i> L.	Hungary	Cultivar
19	LGOVSZKAJA 31-292	PI 289497	<i>Vicia sativa</i> L.	Hungary	Cultivar
20	NASU NO.5	PI 286470	<i>Vicia sativa</i> L.	Japan	Cultivar
21	LANJIAN NO.1	GSS011	<i>Vicia sativa</i> L.	China	Cultivar
22	LANJIAN NO.2	482	<i>Vicia sativa</i> L.	China	Cultivar
23	LANJIAN NO.3	441	<i>Vicia sativa</i> L.	China	Cultivar
24	SUJIAN NO.5	CF005904	<i>Vicia sativa</i> L.	China	Cultivar
25	SUJIAN NO.4	CF005910	<i>Vicia sativa</i> L.	China	Cultivar
26	SUJIAN NO.3 (HUAIYIN)	CF005913	<i>Vicia sativa</i> L.	China	Cultivar
27	SUJIAN NO.3 (NING)	CF005912	<i>Vicia sativa</i> L.	China	Cultivar
28	6625 (DAJIA)	CF030070	<i>Vicia sativa</i> L.	China	Cultivar
29	6625	CF005914	<i>Vicia sativa</i> L.	China	Cultivar
30	ZHONGMU324	CF005908	<i>Vicia sativa</i> L.	China	Cultivar

Table S2. Characteristics of 300 VsILP markers

Marker ID	Forward Primer	Tm(°C)	Reverse Primer	Tm(°C)
VsILP00 1	GACAAAGCCCAGATTTGCCT	61.39	GCCAACATATCGCAACTAGAG	59.34
VsILP00 2	ATGCCTTCAAGAACCGTAGAG	60.29	ATAACTCTGCTAAGTCTTCGTCC	60.13
VsILP00 3	TCTTATTAAGTGTGGTAGCGA	57.42	TGATGCAGAAAGTTATTGTAAGG	57.35
VsILP00 4	CTTCAACATTGGCGGGATTC	60.02	ACAAACCCAACCTCTTTCTC	58.12
VsILP00 5	AGAACATGGGTCATGAAATCCT	59.93	GCAGAAGCAATAGAACCAATAGC A	61.99
VsILP00 6	TCGGAAGTTAATCCCATGCTC	60.36	TCTCAGTCAATTCAGGATAGGA	58.24
VsILP00 7	AAATCCCAAGCATTAGTCCA	57.26	TTCTGTTTAGACTCCTGCTG	57.34
VsILP00 8	TTGTTCTCAACGTTTGTGCTCAG	62.53	CATTGTTCCCTGGTTGCTACTC	61.71
VsILP00 9	GGTGGAAACAATCAAGAAACTG	58.51	GCAGCCCTTTCACATAAATC	57.59
VsILP01 0	GCTGTCAAGAGACTATCTAAACAC	59.41	TCCAGAAGCCTAGCTAAATTCC	62.31
VsILP01 1	GGTTGAAAGTCCTATCCACAG	58.5	GAACCTTATGACCTACACGGCT	60.6
VsILP01 2	AGGGTTATTCGGTATATGACAG	57.34	ATAGTCAGGGAAGACACAAGG	59.31
VsILP01 3	TGGTTCTGGAATGATGGTGG	60.16	GTTGGGATGAGAAATACTTCTC	57.99
VsILP01 4	CTTCGGCTCATATCATCACTGCT	62.95	CGCAAACAGAATCATAACAACAGG	61.42
VsILP01 5	ACTGGAAAGGATGTTATTTGGG	58.8	GGCTGAACGAAAGGAAATCTG	60.01
VsILP01 6	ATCAACCAAGAAATTCTGCTCC	59.41	TGCAGATCTTGACATTCTTCC	58.49
VsILP01 7	GCTTTACTTGGTCGTATCCC	58.52	GAAGACCTCCAAGATCAGTAGAC	60.13
VsILP01 8	GCTCAAGAAGGGTGGAATAG	58.14	GGTTCTGCTTCACTAACTGG	58.66
VsILP01 9	GATGCCGTTAAGTTTGTAGAG	57.18	CGATTGAGAAGAATATGCTGAG	57.23
VsILP02 0	GGATGAATTGACACTTCTCGT	58.51	AAATCATAGCCATCGCCGTC	61.08
VsILP02	GTTCAACTACTATTTCTGCTGG	57.27	CGCTACTACATCATTCTTTCTTCC	59.76

1					
VsILP02	AAACACCTCCTTCTATAACCACCA	61.3	GTCATCAGATAGATTGCTGTTCTC	59.52	
2					
VsILP02	GATGGTTGGATATTGCTTGTGGT	61.72	ATGTTCCCTTCGCTCCTCAG	62.11	
3					
VsILP02	GATGTTAGCTTAGTCCAGTCT	57.03	GATTGGTTGTCTGAGTTTCCT	58.34	
4					
VsILP02	TCTTATTGCCTGTTTGCCGA	60.45	AGATGATAAATAGCATGAATCCCA	58.13	
5					
VsILP02	CCTCATCATTAAACACATGCC	57.01	AGATTGCATAATTCATGGTAAGG	57.19	
6					
VsILP02	GGTCTATTATGTTACGGTCTGCT	60.19	GTCGCTATCTCTGTCTTGTT	57.52	
7					
VsILP02	CATATTGTGGAAGTAAAGCCTC	57.42	TTCATCTGATCTATCGTCTCCT	58.13	
8					
VsILP02	GGGATGATGGAATAGGTATATCTC	57.84	TTCTTTGCCTTTACAACCTGAC	57.13	
9					
VsILP03	TGACTTATGTTGGAGCAGGA	58.83	TATTTGCAGGGAACCATTCTC	58.48	
0					
VsILP03	AGCTGTTGAGATAAGTTGTGAG	58.56	GTTGTATTTCCATCAGGAGTTG	57.52	
1					
VsILP03	GGGTTGTTTATTCAGTAGGAGAC	58.99	AAGCCCAGATCTGAACATCC	59.94	
2					
VsILP03	GGCTTTGCTACATCAGATACGTC	61.86	TATTTCCCTGACTCACGGATAACC	60.13	
3					
VsILP03	CAATCCGAGATATGGGTGAC	58.01	CTTGTTTCATCTCCATGATATCCAG	59.27	
4					
VsILP03	GGTACTCCTACCATTGTAAAGAC	58.49	CTCCCATGAGTTCTTCAAGAG	58.22	
5					
VsILP03	CATTTGATTGGTGTATCAGCGG	60.46	AAGAGCCAAAGAAAGCACAACTG	62.57	
6					
VsILP03	GCTTCAACAGTGCCTTCCTC	61.72	TTGACACCAGTTTCCTTAAGCGA	62.85	
7					
VsILP03	AGATGTTGCGTAGGACTTTCAG	60.86	TGAGCGACGATAATGTATTGAG	58.59	
8					
VsILP03	ATCTCAAGGCCGACCATTGT	62.06	AGCTATTTCACTGCACCCAGA	61.97	
9					
VsILP04	GCATAAATGGACTGGGACTG	58.79	TGTCGCCGATAAAGGATGAAG	60.09	
0					
VsILP04	TGGTCAGTTGTCCCTGTCAC	62.19	GAACAGAAACAGTGGCGGAG	61.71	
1					
VsILP04	ATTAAGGGTAGCAGTAAGAAGTGG	60.37	CAGTTGCCAGGAATCACCGA	62.96	
2					
VsILP04	CAAGGTCATATCAGGTAGTATCAC	58.49	GCTTTCACTTCATCCGTCCT	60.52	

3				
VsILP04	GGGCAAGTTCAGACATCTCC	60.88	GCAATATTAAGTCTCAACCC	58.45
4				
VsILP04	AACAACCTTAGACGAACCCTTTCTC	61.27	TGTGGAATGCAAGAGATGGGA	61.98
5				
VsILP04	GGGATTTTCAGAGCAGCACCT	62.7	GTCGCATTCATAAGCTCTTCCA	61.25
6				
VsILP04	ACGATCCTTTCATCACCACT	59.21	GACCGAAGAGAAGAGTGTTAGAG	60.38
7				
VsILP04	GCCATCTAACGGATCAATCGAC	61.68	CCAACCACACTTTCTTCTC	58.87
8				
VsILP04	GCAGTTTGATCTTCCAGTGAC	59.67	CCTTTGATTCTAACCTGCGA	60.56
9				
VsILP05	TTGGTCTCGCACTGTCATGG	62.94	GTGTCAACACGTTTGATTCCAG	60.78
0				
VsILP05	TGTTTGTGATTTGTTGTGGG	57.5	GCCATATTGTCCATACTGCC	58.94
1				
VsILP05	CTTTGCCATGTCTAATCCCACC	61.78	ATGCCCAACTTTCCCATCAC	61.11
2				
VsILP05	ATCTTTGCCATGTCTAATCCCA	60	ATGCCCAACTTTCCCATCAC	61.11
3				
VsILP05	TTTGGAGTTGTCTTTGGCAG	59.08	TCAACATTTCTGTATGCCGA	57.7
4				
VsILP05	CGAGAATTTCAATGTGATGCTG	58.79	TTAGTGCCTTCAAACGTGCC	61.65
5				
VsILP05	GATGCCTACTGATCCGTA	58.86	CAAAGATACTCCCAGATTCGCA	60.66
6				
VsILP05	ATCCCTCGCAAGGTTTATAC	57.54	TCACATCCTCCCATATCTGA	57.39
7				
VsILP05	GTCGCAATCATTAGAAACAACC	58.73	TCCATTAAGTCTCCAGCA	61.4
8				
VsILP05	GGGAGATAACATGGGATTCGG	60.49	ACCAAGCCTTAAGAACAGAG	57.61
9				
VsILP06	TCAGGCATTTGATCCCTTCC	60.23	AGTGTATGCTGTCTTCAGTTCC	61.07
0				
VsILP06	AAGGTTGATGTTGTGTTTGCTG	53.4	CCTCCGTCTCCAATGGTTATG	55
1				
VsILP06	ATACGAGTACATGCAGCAAGAC	53.4	GCAGCAGCTTCCTCAGTTG	55
2				
VsILP06	GCTTGATGACGAAGGAAACAC	54.4	CCCGCATAGCATATTCTGGAG	54.1
3				
VsILP06	ATGGACTTTGATTCTCTGTGTG	54.8	GCCTCTTCTTCTTAAATGTTGG	55.2
4				
VsILP06	GATCCAAGGACACTGAACAAGG	54.8	TTTCTCCACAATGCGACAAG	55.2

5				
VsILP06	TTCTCAACCAAGTGTGACAGG	54.5	GGGTAACATCATCAATGCCATC	54.5
6				
VsILP06	CCATTAAAGCTGGTCCTTGAG	54.5	GCGGGCATCGTCATATCG	54.5
7				
VsILP06	GGCGTGGTGCTTCTTGAG	55.1	AACAGTTGCGACAGCTTCC	53.5
8				
VsILP06	TCATCCCTCACTACCTCGTTG	55.1	GCCTTAGCAGCAGAGATAACAG	53.5
9				
VsILP07	CAGACGCACATACAATCAATGG	51.9	TGTGACCAGCAATGGACAAG	52.4
0				
VsILP07	CATTAGTAGTAAGTGGGACCAG	53.7	TGTTAGATAGTTCATCGTGTGG	53.7
1				
VsILP07	TCAATTCTCACCTCCAGACTTC	53.7	TCCAAGAAGGCAACCAACTATC	53.7
2				
VsILP07	GCTGTTGCGTTGAAGGAATC	53.6	TTAGACGGACAAAGCGAGTG	52.9
3				
VsILP07	ACAATGAAGCATATCCACTACG	53.6	CACCCAACAAGCAAGCATAAC	53.2
4				
VsILP07	CTCTGGATGAGCATCTTGTTG	53.9	TGTGTAGCACTTGGAGTAGC	52.9
5				
VsILP07	ATATCGTACTCTTCGCTTGC	53.9	TAACAACATCCAGTTGAACAAG	52.9
6				
VsILP07	TTCCATTCTGACCAACTTCGC	54.2	GGAGCAGGCAGAACATCTTG	54.3
7				
VsILP07	GGGCTATGGAAAGGTTGACAG	54.2	AGTTGTTTGCCTCTCTGAAGTG	54.3
8				
VsILP07	GTGGCAAGTAGGAAGGTAGTG	52	CTGTGGTATTGAAGCAAGAAGG	52.9
9				
VsILP08	AACTGTCTGATTTTGGGATGGC	52	GGTGACCTGTGGCTAGATACTC	53.2
0				
VsILP08	CCATTCTCCTCCAACCCTTATG	52.8	CATTGAGTTGTTGAGCAGTCAG	53.2
1				
VsILP08	GGCGACGACATTGTGGTATC	52.8	GAGGAGGAAGCGGTCTATTAAG	53.2
2				
VsILP08	ACCAACAACATCCGAAACTGAC	53.8	CCAGCAACACCTATGACGAAAG	53.9
3				
VsILP08	GTCCACCGATTTCACTCAGTTG	53.8	CTTTACCGAGACGCTCTTTTAC	53.9
4				
VsILP08	AAGCCGTCAAGACCGTAATC	54.9	GAGCCTGAGTCGAAACCTTC	55
5				
VsILP08	CAGTTCATCCAGTGCCATCC	54.8	GGCTTTAAGGTCTGTCACAATG	54.5
6				
VsILP08	TGTCAGGGTGTGGAAATGGG	54.9	CCGAACGCAAAGGCTCTAATC	55

7				
VsILP08	AGGACCAAGAAACAGGCTCAG	54.8	CAAGGACACGGGCAACAATG	54.5
8				
VsILP08	AAGTCTGGAGCGAGTTTATGG	54.3	CGAGAGGCAGCAGGAATTG	54.5
9				
VsILP09	CGGAGGAGGCGTTGGTAC	54.3	TAGGCAAGTCAGATGGCAATTC	54.5
0				
VsILP09	GCACCTCCACCTCAACAAC	52.5	TTAGCATCAACAATGGCAACAG	51.5
1				
VsILP09	GATTTACATCGCCCTGGTAGAG	55.3	TAAGAACCCAAAGCCATCATCC	55
2				
VsILP09	ATCAAGTGGAGGGCACAGTAC	55.3	TGTCCAACATCCAGTCGATCC	55
3				
VsILP09	GTTATGGGCACCTACGGATATG	54.6	TTGICTGTTGCTCTTCTTCCTG	54.2
4				
VsILP09	TCAACAACGGTGGGATCAATAC	54.6	AAGCAGTAAGACGGTCAACATC	54.2
5				
VsILP09	TACCATTACTCAGCTCGTGTTT	54.1	TCGGTCCTTGATGAAGAAACAG	54
6				
VsILP09	AAGACAGGCATCAAGTAGTAAC	54.1	GCAAGTCGCTGAAGTACAC	54.2
7				
VsILP09	TGCTACAAGGATGATGGAAACG	55.7	TTTCTCTTTGAGACCAGATGCG	56
8				
VsILP09	AAGGGGTTTCGTTCTGATTCTG	55.7	GTCCACTCCTTGAACACATCC	56
9				
VsILP10	GATGGTGCAGGCAGAGATG	53.1	ACTTGTCGTCTTTCGGAGATC	53.3
0				
VsILP10	AGTTTGATTCACTCAGGAAAGG	53.1	CAGACTCTCGTTGGCTATGG	54.1
1				
VsILP10	GCTAGAGGTAGGAGGAAGGAG	53.8	AACCACATTGACAGCAGTAGAG	53.1
2				
VsILP10	AAAGAGGGATCAGCAAGGATTG	53.8	CCACGGTCCATCAGAAACTC	53.1
3				
VsILP10	TCAACCAAACCTCCTCAAGAAC	53.9	CCTGATGATTCGTCTTCGGATG	53.8
4				
VsILP10	TGGAGGATGGAAGCATTGG	54.7	GCTAGGTATGGACATCTTACAG	55.2
5				
VsILP10	GTTGGCTTTGCTTTTGTTTTCG	54.7	CCTTTGGGTAGACCATTTCATCC	55.2
6				
VsILP10	ACTGCTGGTCTTTTCAATTTGG	55.5	ATTGTTTCGTCTTGAATGTGAG	55.1
7				
VsILP10	GCTCGGTGCTGGAACCTTAC	55.5	CATCCCCGCTTCTGACTTG	55.5
8				
VsILP10	ACAATTTACCCTCTCATTACG	53.9	GCTTTGGTAGGGTCTCTCATG	54.1

9				
VsILP11	TTCATCATGGTGGTGTGGAG	52.1	GTCCCCTGTAGTGCCTCTC	52.9
0				
VsILP11	GCGGATACACGAGGGGAAC	54.2	CAGATTGCACCAATTTGCCTTC	54
1				
VsILP11	CTTGAGGCAGCAGTAACC	54.2	CTGTGAAGTCGCCAAATGATTC	54
2				
VsILP11	GCGCCAAGAATTTGAAGG	54.8	TCACACCGAAGAAAGAAGAGAC	55
3				
VsILP11	TACTGCTTTGGAACCTCGTCAAG	51.6	CCGTAATCCTTCACCGACATTG	51
4				
VsILP11	CAACAGCCTTCTTCAATGACAG	51.6	TCTACTGCCACCATAAGGAGTC	51
5				
VsILP11	TGACAACTCCAGCTCATAAC	54.5	CTACCACAAACCCAACCAAAG	54
6				
VsILP11	GTCTGCTTTGGATGAACTGTTG	54.5	CTTCAAGTGCTCTTTCTCCTC	54
7				
VsILP11	AAAGAAATGCTTGTGTGAGGTC	54.3	CTGTGAACTTCTTGGCAACTG	52.5
8				
VsILP11	TGTATCCGACCTGACAGTAGTC	54.3	AACAGAACGCTTCACACAGAC	53.7
9				
VsILP12	GGAATGGATTACCACATACCTG	54	CTAGTAACAACATCACCAAGCC	54.3
0				
VsILP12	GCAGTCTTCACAATTCATAACC	54	TTCCCAGCAACCTCCTTTG	55.1
1				
VsILP12	AAGCTGGCTTTATGCAAGTATG	54.4	TGGTGGAGCACTCAACAATG	54.5
2				
VsILP12	TGCTCGTGCTTTGATGACTG	54.4	ATGACCTGTAAGTTGGTTGGC	54.7
3				
VsILP12	CATGGAGTAAGATGCCACTTTG	54.1	GATCTCGTTCATGGACAAGGG	53.4
4				
VsILP12	AAGCACATCATTTCCTCAACATG	54.1	GGAGAGATCATTGTGGACTTG	53.4
5				
VsILP12	AGCGTCTAAAGCAAGAGGAAG	54.5	TTACCATTACCAGGCTGAACC	54.5
6				
VsILP12	ACTTAGCTGGATTTCTGTCTTC	54.5	CAGGAGCAATCTTTCAGTCAG	54.8
7				
VsILP12	CAGTTGATGTACGGACAGGAC	53.5	TTGGGCATGGAGACGAGAG	53.5
8				
VsILP12	CAAATGCGGTGGAAATGTGG	53.5	TCCTGAACACTTGCTTTCTCC	53.5
9				
VsILP13	CAGTCACGTAGTCTCCTAACAC	54.9	ACAGCCTCCAGTGATTTAAGTC	54.7
0				
VsILP13	CAACGGTCAACCTAATGTCAAG	54.9	GAGACAAACTAGCAGCAACAAG	54.9

1				
VsILP13	TCGATCTCATCTGGTCTCTTAG	53	TAATACATTGTGCGGCAGTTAG	53.6
2				
VsILP13	GCGTATCTAAGGGAGGTAGTG	53	GGAGTGTGTAAATTGGTCTGTC	53.2
3				
VsILP13	AAGGAGTCAACCAAGATCGTG	53.4	GCTACAAAGTGTCCCAAGG	54.3
4				
VsILP13	TTTGGCAAGCGGCTTAATATAG	53.4	GTTGTTACCTCCTCGGATGAC	53.2
5				
VsILP13	CATCTGCCACATACACCTTCTG	54.6	ATATCACTCCCTCCCACCATTG	53.9
6				
VsILP13	GGCAGAAGTTGAACAAGAAAGC	54.6	AACATGGTCCACAGGTTTTCC	53.5
7				
VsILP13	TTTGTTTCAGTCCCTCCATTTTC	54.3	ACGTGTAGCAGCTTCCTTG	53.7
8				
VsILP13	TCACTCTTCTTACACCCTCTTC	54.3	TTGAAAGACGAACTGGGTTTAC	53.7
9				
VsILP14	CAGCAGGATCAGAGGCAATG	53.6	ACAAGAAGCGGATAGATCAAGC	53.2
0				
VsILP14	CCGTGATAGGTCTGCTGTC	53.6	AACTGTTGGATTCTTGAAGGC	53.2
1				
VsILP14	TCATTCGCCATAAACTTCAC	53.6	TCAACCTTCATAGCCAGATTCC	54
2				
VsILP14	TGGTCCTTCAGGGGATCTAAC	54.7	CGGAATGATGAAAATGGCACTC	54.5
3				
VsILP14	CTTAGCTGTGCGGACAATGG	54.7	GGCTGCTGTCTTGCGAAC	54.5
4				
VsILP14	TGCTAGTCCAGTTGTACCTACC	53.8	GCCACCGCTTTGTCCTAAATC	53.4
5				
VsILP14	ACATACTCAAAGTGCTGCATCC	54.3	CATCTGGGAAGTTGGGTTTCTG	54
6				
VsILP14	TGCGATGGAACACACCTACTG	54.8	ATGACCAATGGAGGACGAAGAG	54.1
7				
VsILP14	TCTGATGTGCTCGTCTTTGATG	54.7	TTCCCTCTCAGTTCTCCCTTG	54.7
8				
VsILP14	GATGACAATGATACGGAATGGG	54.7	AGAACTCCTTGCCGTAATACAG	54.7
9				
VsILP15	GCCTTTACTCCATTCACCTCTC	53.1	GCAGATAGTCGTCAACCTCAAG	53.6
0				
VsILP15	GAGATGGAAACTTCACCTTCTG	53.1	CCAATAAGTTCCTCGCATATCG	53.4
1				
VsILP15	ATCAGGGCTCGAATTTCCAAC	52.3	CCTGCTCTCCGTATTAGACTTC	51.9
2				
VsILP15	GAGGAAACCCGAAAACAAAATG	52.3	CATAAGCAACTCTGTCAACAAG	51.6

3				
VsILP15	ATGTTGAACGAACGAAGTGATG	55.2	GTGCTCTTGAAGTTGGTTTCTC	55.2
4				
VsILP15	ACTACAGCGGACCAGATAGAG	55.2	ACAGCTCGGTTAGTGAAATCC	55.2
5				
VsILP15	GGGCTAAATGCTTATCGTCTG	53.6	GCAAGGCTTTTGATTTTCTGAC	53.8
6				
VsILP15	AGCGGGAAGATTTTACACATAG	53.6	CCATAGCCTTCACAAGCATTC	53.6
7				
VsILP15	CATGTCTAACGGAAGTGTGG	55.6	CCTCGTAATCATCATCCAGAAG	55.9
8				
VsILP15	CCTAATGCAGTTGGATGGGAAC	55.6	AGCACGCCACCTCATAAGC	55.9
9				
VsILP16	TGACTTCTTCTCACATCCAACC	54.3	GTTGCATCTAGGCTCATTTCATC	53.7
0				
VsILP16	AAGTCGTTGCCTGAGAAGTATC	54.3	TCCATCTCGTGCGACAATTC	54.1
1				
VsILP16	ATGATGTCGCCACAGAACTTG	54.9	AACACTTGCCTAACGAACTACC	54.7
2				
VsILP16	AGATTGTCAAGTTGTACGAGAG	52.1	ATCCATACTTTCACTAGCTTCC	51.4
3				
VsILP16	TGTATCGGATGCTACAAGGATC	53.6	GCGTCGGGAAGGAGGAAG	55
4				
VsILP16	CATACGCTTTGCCTTTAATGAG	52.4	TTTAAATCCATGCTCTGCTTCC	53.1
5				
VsILP16	ACCCTCCAATTCATAACACCTC	53.8	CCCATGCAAGCAACAAAGTC	53.9
6				
VsILP16	ATGTGCTTGTATTGTTCTTGGC	54	CCACCACTTAGCAGCAAAAATG	54
7				
VsILP16	CAGCAAGAATCACGCCAAAG	53.8	GGCAATCTTCCGAAGTTCATG	53.6
8				
VsILP16	CTTTCGTTTGTGGAGCATGTG	54.4	GCTGAGACTGGCTAGAAGAATC	54.4
9				
VsILP17	ATGGCTGGACTTGCTGTG	52.7	AGGAATTTGACTGTACTGGTAG	51.3
0				
VsILP17	TTCCGAAATACAAGCGAAAGAG	53.3	TTCCCAATGTAATGCTGTTAGG	52.5
1				
VsILP17	ACATTCTGATTTTGGCTGGTTG	53.9	ATAGTTTGCCCAAAGATGAAGG	52.7
2				
VsILP17	AATTCGTTGCACTTCTCCTACC	54.8	TAGTTTCAGCAGCAGCATCAC	54.9
3				
VsILP17	CTTCAGCCGTATCGTATCTACC	54.1	TCCCTCCATACACTTTAAACCC	53.5
4				
VsILP17	TCTCAGCAAATGTCCGTGTTG	55.1	TTCCGAGCGACGACTTCC	54.6

5				
VsILP17	ACTGGAGATGGTGTGAATGATG	54.2	TCAGCGATAGCGGAAACAATAG	54.8
6				
VsILP17	CCGCCGTCACACATCTTTG	55	TCTCCTTCTCTTGGTAAATCG	54.4
7				
VsILP17	GCAACGGTTGGGCTGATG	54.6	ATGCCACCACAAAGTTCCTC	54
8				
VsILP17	ACAAACACGATACCCGAACAAC	55.6	TCTGCCCAGGTGAATCATAAGG	55.9
9				
VsILP18	CTCTCCACGCAAAACATTTCAG	54.7	TTATTGGTGTCCAGCAACTCC	54.1
0				
VsILP18	TTATATGCTGTCGTTTCGTCTCC	54.2	CCAACATCATTTCGACCATCTC	54.4
1				
VsILP18	GAATGTTTCAGGTTTCAGAGGAAG	52.9	TCTCCTTCTTCTCTGCTTTGTC	53.9
2				
VsILP18	CTTCCATCAACACATCCAATCC	53.5	TGCTGTCCTTGTATGACTCTTC	53.9
3				
VsILP18	ACTCGGGTGGCATGTTATTTG	54.8	ACCTATGGTTGTCGTGAACTTG	54.7
4				
VsILP18	TGATGGACGAAGCATAAGTAGG	53.8	TTTCTGTGCAAATCGAGATTC	53.5
5				
VsILP18	ACTGCTTCTGCGTTGGATG	53.9	TGTGATAGAGTCTGTTGGTTCG	54
6				
VsILP18	CTGGCACGGTTGACATTGAC	55.5	GGCAACACACTGGATTGGAC	55.1
7				
VsILP18	ACAACAACGATGAAGTGGATGG	55.3	CTCAAGGGCAGAAGAAAGTTCC	55.3
8				
VsILP18	ATCCTTACACAGCAAATGATGG	52.9	ACGGAAACAGGTTGGTTGG	53.6
9				
VsILP19	GGCTCACCACTGCAATGC	54.6	TTGTTGTCCCCAAAGCTGTG	54.5
0				
VsILP19	ATCAGTGAGTATCCGCTTAAAG	51.9	GTCTCTTCCATCACAACACTACAC	52.7
1				
VsILP19	ACTCCTCCACTTCCTTCTAACG	55.3	GGCGAAGAACGTGCATTATAAC	54.6
2				
VsILP19	CTCATCCCGAACTCTCCAATG	54.1	AAGCAGCAATATCCTCAGGTG	53.9
3				
VsILP19	CTGCGGTATGGGAGATTAGC	53.6	AGAGTGAAACCTCAGCAAGAAG	54.4
4				
VsILP19	GCAAACGAGGCAGTTAAGATG	53.9	GCAGCGCATAACGACATAATC	53.3
5				
VsILP19	GGCTCCCTTCAACTACTCTCAG	55.9	CACAACGAGGTCAACTGGTTC	55.4
6				

VsILP19 7	GGATGCGGCTGATATAGACAAC	55.2	AAGCTGCAACCAAATTCTCCTC	55.5
VsILP19 8	TTGCCCTCTCAACTTTGATG	51.6	TACTCTTGTCTTGCTAACATC	51.7
VsILP19 9	AATGATCAGCCTGAGCTACTTC	54	CAGAGAGACATTTGTTGCGAAC	54.4
VsILP20 0	GTTGATGCTTTGAAACGAACAG	53.3	CCAAGAACAGGTCCACTTCC	53.7
VsILP20 1	ACGAGCCTTGTTTTACTGATAC	54.3	AAGTCAGAGCGTCTTGTTC	54.5
VsILP20 2	ACAGGATGATGGTGATGGAAAG	54.2	CATTGCTCTTGCCTACAGAAC	53.9
VsILP20 3	GCTGAGGCTCCGAGTGAAG	55.6	GCCAGATGTGTACCAGCAATC	55.3
VsILP20 4	CATTCCAAGATGCCTGTTTC	54.3	CTGTCGTTCTGCCACTTG	54.2
VsILP20 5	GGTTCTGAGACACAATGTTTGG	53.9	ACGGTAGAGGCTCCCTATTG	53.9
VsILP20 6	GGACAACGAGTAATTGCCATTC	54.2	CCTAACTCAGGACGGTCAAAC	54.3
VsILP20 7	CGTCCGTCTACATCAATATCC	52.7	ATCGGTTGGAGGTTTCAGTTG	53.5
VsILP20 8	ATGGAATGCTGGTGTCTCG	53.9	TGAAGCCAATCAACAGAGGAAG	54.7
VsILP20 9	GGGATATGTCTCCGTTTCACTC	54.4	GCGGTTGCTCCTCTGTTAC	54
VsILP21 0	CGCAAGAAGAATTGGTTGAATG	53.1	CAAGAGTGAAGTTACCGATAGC	52.8
VsILP21 1	GGTCTGTATTGATCCATGTTG	53	ATGTTGTGTAAGACTGTGTAGC	52.6
VsILP21 2	ATGGTGACAACCTTGGTTCTTG	55.1	CTTTGCCCAATCCGCTCTAAG	55.3
VsILP21 3	TTGGACATTTCAACTGGGAAAG	53.2	TGTCACAAGGCACACAAATG	52.8
VsILP21 4	TTAAAGGCAAGTGGATCTCTGG	54.1	GCTCGCTCGTACACAAGTC	54.2
VsILP21 5	AACTGGTGAAATATGCCATTGG	53.4	TTCTTCTACTTCTCTGTCAGC	53.3
VsILP21 6	ACCGCTTCCCTTGATCCC	54	ATCTTCTGCCTTGGTCCAATC	53.8
VsILP21 7	ATGCTGCTGATTGTTTGTCTC	53.1	GAGAGGTCTGGTGGAGGAG	53.4
VsILP21 8	CAGCAAGAAGCCGAAACAG	52.8	GCATCCTGGTTTTACAACCTTG	52.6

VsILP21 9	ATCTGAAGGAGCTGAGGATGC	55.4	CCAGAACCCACAAATGGTATGC	56
VsILP22 0	GCTGTAGGTCTTGTCCACTTC	54.2	GCATTACATGGCAGTTGAAGC	54.4
VsILP22 1	TGAGATGGGAGCATTACTGAC	54	TCTAGCAGTCCCTGGAAGTG	54
VsILP22 2	CAGCCTTCTGGAAGATTGC	51.7	GACTTGAGTATTTCCCATCTCC	52.1
VsILP22 3	CATGGGAAGCAACTACCTAG	54.6	CACAAGCATTGGAGCATCAAC	55.2
VsILP22 4	TGAAGATGTTTTGGGCTTTGTC	53.8	CCGTACACTGGAATGAGATATG	52.3
VsILP22 5	CGCATTTCACGCCACAG	55.1	CTACCGCAAAAGCAACCAAAC	54.9
VsILP22 6	TTGTTACCTTCATGTCGATTGG	52.9	TGGTGTAGCAGATAATGTGTTG	52.6
VsILP22 7	CTCCGCTGTTATTTCTGGTTCC	55.5	GCATCCCTTCACGACAAAC	55.2
VsILP22 8	TCAGGCACCCAAAGTTGTTTC	55.1	TGAACTACGGTACTCTGGACAG	55
VsILP22 9	GACTGGATAGGCACCAATCTG	54.1	GGCACGCACGATTACTATTTTC	53.8
VsILP23 0	CAGAATGAGGCATCCACAATG	53.2	TATCACCCGCACCGTTTG	52.9
VsILP23 1	AACCTTCCAAGATTGTGAACAG	52.9	GCAGATTCAGCATCCAAAGG	52.8
VsILP23 2	ACGGTAGTTCGACTAGCAATAC	53.9	CGACCAGTTCATACCTTCAC	54.3
VsILP23 3	AGGCTGTTAGGATGTTCAATTC	52.5	CACGGTGCAGATAAAGTAGTC	52.5
VsILP23 4	GAATATTGGGAGCGACGAGATG	55.2	TCGTAGCATCCATGTCGTTTAG	54.5
VsILP23 5	TCGGAAGTCTTCTATACTGG	52.9	CCCAACTACCACTGTAAAGAAC	52.8
VsILP23 6	GACCAGAATTACTGCCCTAACC	54.6	ACCGTACTTGTGTTGATGATG	55.2
VsILP23 7	TGCTTCTGGCCTACAGGATTC	55.6	CCAATCTTGTCACTTCCCCTC	55
VsILP23 8	TACGGTGGCAAGTATTCTTTGG	54.8	AGCAGGTCTCATCATCGGATC	55.3
VsILP23 9	AACGATGGCTTGCTATTTGC	53.2	AACCAGACTCTTCAACAATGTC	52.7
VsILP24 0	GCTTATTGTGTTTCGAGGAGGTC	55.3	TAAGAGCAGGATGCAGTGAATC	54.3

VsILP24 1	GCTTGAAGACGCAGATGAGAG	55.1	TGTAACCGACCTCCCATTAC	55.6
VsILP24 2	CTTCATTTTCGTGGAGCAAGATG	54.2	GTTGATTGGCTGAGGCTGTAC	55.2
VsILP24 3	CCTGGTGATTCCTGCTGTC	54.2	TGCCTTCATTGGTACACTGG	53.4
VsILP24 4	GTGCCAAATGGGAGCCTTG	54.8	AGAGAATTCCTAAAGCCGTTCC	54.2
VsILP24 5	AACCCTGGCTACTCTCTAACC	54.3	TGAAGGAAACGAGGCAACAG	54.1
VsILP24 6	GTGTGCTTTCTGTCTCTCGTC	55	CCCATTCTGTGCAATTCTTGTG	54.6
VsILP24 7	CAGAAGATGGAATGACGATGC	53.1	GCAAGTGTAGGCTTGATTTC	53.5
VsILP24 8	GATGAACCAACCAATCACTTG	51.4	TGCCATCTTTAACTCAATCAC	51.2
VsILP24 9	CAAGACAAGCAGCTCAAGAAC	53.7	ACTGTGATTTCCAAAAGTGTC	53.2
VsILP25 0	TGGGGTTTAGTCTTGTTCAAAG	52.6	AGAATCAGCAGAACTCCATTG	52.8
VsILP25 1	TACCGTCGGAGTTATAACCATTG	53.6	AAGGCTGAAATATTGGCGAAAG	53.8
VsILP25 2	GCAGATACTCAGAGCAGTGAAG	54.7	TGAGCAGGAACAACAGAATCTC	54.5
VsILP25 3	AATCCAGCAAGCGTGATGAC	54.6	TCTTCCTAGCATTTCGATTACC	54.4
VsILP25 4	GCTTCTCCATTTACCTCTTTC	53.5	TATTCGCCGTCCTAATTCATC	54.2
VsILP25 5	CCAGCCAAGTCCAATCTCAG	53.9	CCACCTCCGCACAAGAAC	53.5
VsILP25 6	CGGCTACTTCTCATTATCTGTC	52.4	CGATCTCTTAGCTCGTCCAG	53.1
VsILP25 7	AGTTGGCTGTCTCCCTATTTTC	53.2	TCCTTCTCAGTTCCTTGTCTTC	53.5
VsILP25 8	GGGAAGCAAAGTACTGAAG	55	GAGTGTGCTCGCATGAACC	54.7
VsILP25 9	GCCTCTCCGTTTTCTTCAAG	52.5	GCACTCCATATATCAACCTCTG	52.3
VsILP26 0	GCGTCTGAGAGATGATTTCAAG	53.4	CATGGCATCAACTGAGAAAGC	53.8
VsILP26 1	AATGAGCGATGAAACAGGATTG	53.5	CGAAGCATCTTGAATCAACTCC	53.9
VsILP26 2	CCTGGTGTTGATGAGTCTTTG	53.7	GGCTGTGTTTTATCTGCTTCC	53.5

VsILP26 3	AGCGGGACTGGGAGAAAG	53.6	TGAGTTTGAAAGCATGACTTCG	53.7
VsILP26 4	ACAATTGGTAATGTTGCATCTG	51.8	TGCTTCTTATTATCACCGAGAC	51.9
VsILP26 5	GCACCTATTCATTCTACGGAAG	52.9	ATACACAGTGGCAACCCTTAC	53.8
VsILP26 6	AAATCTGCCCTTGCTGGTTATC	55.1	CTCGTATTCCAAGTCTATTGC	53.8
VsILP26 7	GTTATGGAAGGGGTTTGATTGC	54	TACACTGCGTGCTAAAAGAGAG	54.6
VsILP26 8	CTTGCCGACCTCACGATATTAG	54.9	TCAGGACTAGGAAGACTGCTAG	54.2
VsILP26 9	AAGGAAGCTATCAACTGCATTG	53.2	GCATTGGCTCCAAGAACAC	52.7
VsILP27 0	GCCACCAGAAGATTCTACACTC	54.6	TGCTTGCTCAACATTCAAACAC	54.7
VsILP27 1	TACACACTCCAGGGTCATCC	54	GCTCCTGAACGCAATCTCC	54.1
VsILP27 2	TGGTGTGCTATTACTGGAACTC	53.9	CATCGCCTAAAATCGGATCAAC	54.1
VsILP27 3	GACAACAGCAACAGCACTTC	53.7	AGTGGAGTGAAGGCACATTG	53.7
VsILP27 4	TATTAAGTGTGGTAGCGAAGC	52.7	CATGTTCTGAAGAGAAGCTC	52.3
VsILP27 5	AATGCCGATGGAGAGGATTTTG	55.1	ACCGCCACCTCCACTAATAC	54.8
VsILP27 6	AGAACGGAACGGCACCTG	55.1	CGGGTGAACAATATCGCCAAG	55.6
VsILP27 7	CAAGCGAATCAAGAAGCATCC	53.9	CGGTTAAGGTTTCTGAGTTTCC	53.4
VsILP27 8	CGAGCCAACCGTTCTGATG	54.4	CACCGAGAATAGCCAGCAAG	54.4
VsILP27 9	AGGCAGTCTACAAGAAATACCG	54	TCGAACTTCTACACCTTCCTTC	53.6
VsILP28 0	TATACACCGATGACTCCTGATG	53	TGACCTCCAACATATCCATACG	53.5
VsILP28 1	GATACAAGGGACGATGCCAAG	54.7	GAATGTTCTGGACCTGATCTC	54.3
VsILP28 2	GGTTGTTGCTCTGGACTACTC	54.2	GCACAGCATCAACAGAACTTG	54.3
VsILP28 3	CAAGTTCTGTTGATGCTGTGC	54.3	CATCCAGTATGTAGGTGGTTGC	54.9
VsILP28 4	ACTGCTCACTACAGATTCATCC	53.7	TTAGTATGTGTTCCCTCGGTCTC	53.2

VsILP28 5	TTCAGAGACATGGTCAAGATTG	52.2	TCTCCCAATACAAAGCAATGAC	52.8
VsILP28 6	GCCATTTGCTTACTAGGTTTGC	54.7	TCTCAATTCGCTCAGTGGAAAG	54.8
VsILP28 7	ACAACACATTCGGACTCCAAG	54.4	AATTCACCTCCATATGCCCAAC	54.8
VsILP28 8	GCGTGCTTTGCCATCTTTG	54.1	CCACCCTGCCATTGTCAAC	54.4
VsILP28 9	AAATCAGGAGGAAAGGTTGGTC	54.3	GGTTGAAATTCCTCGCAAGTTC	54.3
VsILP29 0	TGCCATTGCTAATCATCTTCTG	53	TTCGGCTGTGTGTCAACTG	53.8
VsILP29 1	TGGTTGTCAACTCACAGGAG	53	AACGGATTCAGCATAAGGAAG	52.9
VsILP29 2	AATCTGCTTGTGTGGACTTGG	55.5	ATCTGCGAAGCTGCCTCTG	55.6
VsILP29 3	GCCAGTCGCGTTAATATCATTC	54.2	CCATCTCACACCTTGCCTTG	54.5
VsILP29 4	GAATCACTTCAGTTGCCTTGG	53.4	GTAGCCATACACCTTAAAGCAC	53.3
VsILP29 5	GGAAAACCCGTCTTGATTGAAC	54.3	CTTCTGTGAATGGAGCCCTTC	54.5
VsILP29 6	TGGCATTGCTAATCAACTTACC	53.1	CGCCACTTGTGCGTTACTC	54.1
VsILP29 7	CGACCGCAAGAAATCCAGAC	55	CTTCAAGCAGCTCACCTTCTC	54.9
VsILP29 8	GGTTTCCAGGCATCTGCTTTG	56	GTTGGCTGAAAGAGTGGTTGAG	55.9
VsILP29 9	ATGATAATGAGACAGAAGATGC	49.9	ATGAAATGTAAGTGCTGAACC	50.4
VsILP30 0	GCTATGGCGTTGTCTGTTG	52.5	GAACTCGGTATCCTTTCCAATG	53

Table S3. Details of 41 polymorphic VsILP markers with their genetic parameter values

Marker ID	Forward Primer	T _m (°C)	Reverse Primer	T _m (°C)	N _A	H _E	PIC
VsILP004	CTTCAACATTGGCGGGATTC	60.02	ACAAACCCAACCTCTTTCTC	58.12	4	0.6 2	0.54
VsILP012	AGGGTTATTCGGTATATGACAG	57.34	ATAGTCAGGGAAGACACAAGG	59.31	5	0.7 3	0.68
VsILP020	GGATGAATTGACACTTCTCGT	58.51	AAATCATAGCCATCGCCGTC	61.08	6	0.5 9	0.54
VsILP021	GTTCAACTACTATTTCTGCTGG	57.27	CGCTACTACATCATTCTTTCTTCC	59.76	3	0.5 3	0.42
VsILP032	GGGTTGTTTATTCAGTAGGAGAC	58.99	AAGCCCAGATCTGAACATCC	59.94	3	0.3 2	0.3
VsILP047	ACGATCCTTTCATCACCCT	59.21	GACCGAAGAGAAGAGTGTTAGAG	60.38	5	0.7 7	0.73
VsILP079	GTGGCAAGTAGGAAGGTAGTG	52	CTGTGGTATTGAAGCAAGAAGG	52.9	5	0.6 7	0.61
VsILP100	GATGGTGCAGGCAGAGATG	53.1	ACTTGTCGTCTTTCGGAGATC	53.3	3	0.1 2	0.12
VsILP102	GCTAGAGGTAGGAGGAAGGAG	53.8	AACCACATTGACAGCAGTAGAG	53.1	4	0.5 3	0.42
VsILP103	AAAGAGGGATCAGCAAGGATTG	53.8	CCACGGTCCATCAGAACTC	53.1	5	0.6 8	0.62
VsILP108	GCTCGGTGCTGGAACCTTAC	55.5	CATCCCCGCTTCTGACTTG	55.5	4	0.3 9	0.37
VsILP110	TTCATCATGGTGGTGTGGAG	52.1	GTCCCCTGTAGTGCCTCTC	52.9	2	0.3	0.3

VsILP117	GTCTGCTTTGGATGAACTGTTG	54.5	CTTCAAGTGCTCTTTCTCCTC	54	3	0.5 1	0.46
VsILP118	AAAGAAATGCTTGTGTGAGGTC	54.3	CTGTGAACTTCTTGGCAACTG	52.5	5	0.7 7	0.73
VsILP136	CATCTGCCACATACACCTTCTG	54.6	ATATCACTCCCTCCCACCATTG	53.9	7	0.7 7	0.73
VsILP146	ACATACTCAAAGTGCTGCATCC	54.3	CATCTGGGAAGTTGGGTTTCTG	54	3	0.2 1	0.2
VsILP147	TGCGATGGAACACACCTACTG	54.8	ATGACCAATGGAGGACGAAGAG	54.1	4	0.3 4	0.32
VsILP151	GAGATGGAAACTTCACCTTCTG	53.1	CCAATAAGTTCCTCGCATATCG	53.4	6	0.8 3	0.81
VsILP157	AGCGGGAAGATTTTACACATAG	53.6	CCATAGCCTTACAAGCATTG	53.6	7	0.7 8	0.75
VsILP158	CATGTCTAACGGAAGTGTGG	55.6	CCTCGTAATCATCATCCAGAAG	55.9	4	0.5 4	0.5
VsILP160	TGACTTCTTCTCACATCCAACC	54.3	GTTGCATCTAGGCTCATTTCATC	53.7	5	0.7 1	0.66
VsILP172	ACATTCTGATTTTGGCTGGTTG	53.9	ATAGTTTGCCCAAAGATGAAGG	52.7	2	0.0 6	0.06
VsILP174	CTTCAGCCGTATCGTATCTACC	54.1	TCCCTCCATACTTTAAACCC	53.5	4	0.7 4	0.69
VsILP176	ACTGGAGATGGTGTGAATGATG	54.2	TCAGCGATAGCGGAAACAATAG	54.8	3	0.5 2	0.4
VsILP180	CTCTCCACGCAAAACATTTCAG	54.7	TTATTGGTGTCCAGCAACTCC	54.1	7	0.7	0.71

VsILP181	TTATATGCTGTCGTTTCGTCTCC	54.2	CCAACATCATTTGCACCATCTC	54.4	5	4 0.7 4	0.7
VsILP189	ATCCTTACACAGCAAATGATGG	52.9	ACGGAAACAGGTTGGTTGG	53.6	7	0.8 2	0.8
VsILP196	GGCTCCCTTCAACTACTCTCAG	55.9	CACAACGAGGTCAACTGGTTC	55.4	6	0.6 4	0.6
VsILP199	AATGATCAGCCTGAGCTACTTC	54	CAGAGAGACATTTGTTGCGAAC	54.4	4	0.4 1	0.38
VsILP211	GGTCCTGTATTGATCCATGTTG	53	ATGTTGTGTAAGACTGTGTAGC	52.6	4	0.5 3	0.42
VsILP224	TGAAGATGTTTTGGGCTTTGTC	53.8	CCGTACACTGGAATGAGATATG	52.3	3	0.5 6	0.49
VsILP226	TTGTTACCTTCATGTCGATTGG	52.9	TGGTGTAGCAGATAATGTGTTG	52.6	3	0.5 5	0.48
VsILP244	GTGCCAAATGGGAGCCTTG	54.8	AGAGAATTCCTAAAGCCGTTC	54.2	4	0.6	0.55
VsILP246	GTGTGCTTTCTGTCTCTCGTC	55	CCCATTCTGTGCAATTCTTGTG	54.6	2	0.4 2	0.33
VsILP247	CAGAAGATGGAATGACGATGC	53.1	GCAAGTGTAGGCTTGATTCC	53.5	5	0.7 9	0.76
VsILP253	AATCCAGCAAGCGTGATGAC	54.6	TCTTCCTAGCATTTCGATTACC	54.4	2	0.4 9	0.37
VsILP262	CCTTGGTGTGATGAGTCTTTG	53.7	GGCTGTGTTTTATCTGCTTCC	53.5	2	0.3 6	0.3
VsILP273	GACAACAGCAACAGCACTTC	53.7	AGTGGAGTGAAGGCACATTG	53.7	3	0.5 6	0.5

VsILP278	CGAGCCAACCGTTCTGATG	54.4	CACCGAGAATAGCCAGCAAG	54.4	3	0.28	0.26
VsILP279	AGGCAGTCTACAAGAAATACCG	54	TCGAACTTCTACACCTTCCTTC	53.6	2	0.39	0.31
VsILP297	CGACCGCAAGAAATCCAGAC	55	CTTCAAGCAGCTCACCTTCTC	54.9	3	0.29	0.27
Average					4.07	0.54	0.49

Table S4. Cross-species amplifications of 283 VsILP markers in leguminous and non-leguminous species

Marker ID	Vs	Mt	Ms	Gm	Lc	Mo	Sa	At	Os	Nt
VsILP001	+	+	+	+	+	+	+	-	-	-
VsILP002	+	-	-	-	-	-	-	-	-	-
VsILP003	+	-	+	-	-	-	-	-	-	-
VsILP004	+	+	-	+	+	-	-	-	-	-
VsILP005	+	+	+	+	+	+	+	-	-	-
VsILP007	+	+	-	+	+	+	+	+	+	+
VsILP008	+	+	+	-	-	+	-	-	-	-
VsILP009	+	-	-	-	-	-	-	-	-	+
VsILP010	+	+	+	+	+	+	+	+	+	+
VsILP011	+	+	+	+	-	-	-	-	-	-
VsILP012	+	+	+	+	+	-	+	-	-	-
VsILP013	+	+	+	+	+	-	+	+	+	+
VsILP015	+	+	+	+	+	+	+	+	+	+
VsILP016	+	+	+	+	+	+	+	+	+	+
VsILP017	+	+	+	+	-	+	+	-	+	+
VsILP018	+	+	+	+	+	+	+	+	+	+
VsILP019	+	+	-	+	-	-	-	-	-	-
VsILP020	+	-	-	-	-	-	-	-	-	-
VsILP021	+	+	+	+	-	-	-	-	-	-
VsILP022	+	+	+	+	+	+	+	+	+	+
VsILP023	+	+	+	-	+	+	+	+	+	+
VsILP024	+	+	+	+	+	+	+	+	+	+
VsILP026	+	+	+	+	-	+	-	-	-	+
VsILP027	+	+	+	+	+	+	+	+	+	+
VsILP028	+	-	-	-	-	-	-	-	-	-
VsILP029	+	+	+	-	-	+	-	+	+	+
VsILP031	+	+	+	-	-	+	-	-	-	-
VsILP032	+	+	+	-	-	+	-	-	-	-
VsILP033	+	+	+	+	+	-	+	+	+	+
VsILP034	+	-	-	+	-	-	-	-	-	-
VsILP035	+	+	+	-	+	+	-	-	-	-
VsILP036	+	+	+	+	+	+	+	+	+	+
VsILP037	+	+	+	-	-	+	+	+	-	+
VsILP038	+	+	+	-	+	+	-	-	-	-
VsILP039	+	+	+	+	+	+	+	+	+	+
VsILP040	+	+	+	-	+	+	+	-	-	-
VsILP042	+	+	+	+	+	+	+	+	+	+
VsILP043	+	+	+	+	+	+	+	-	-	-
VsILP044	+	+	+	-	-	+	+	+	-	-
VsILP045	+	+	+	+	+	+	-	-	+	-

VsILP046	+	-	-	-	-	-	-	-	-	-
VsILP047	+	+	+	+	+	+	+	-	-	-
VsILP048	+	-	-	-	-	+	+	-	-	-
VsILP049	+	-	+	+	-	-	+	-	-	-
VsILP050	+	-	-	-	-	-	-	-	-	+
VsILP051	+	-	+	-	+	+	-	-	-	-
VsILP052	+	-	-	+	-	-	-	-	-	-
VsILP053	+	+	+	+	-	+	-	-	-	-
VsILP054	+	+	+	+	+	+	+	-	-	-
VsILP055	+	-	+	-	-	-	-	-	-	-
VsILP056	+	+	-	-	-	-	-	-	-	-
VsILP057	+	+	-	+	-	-	-	-	-	-
VsILP058	+	-	+	-	-	-	-	-	-	-
VsILP059	+	+	-	+	-	-	-	-	-	-
VsILP060	+	+	+	+	+	+	+	-	-	+
VsILP061	+	-	-	+	-	+	-	-	-	-
VsILP063	+	+	+	+	-	-	-	-	-	-
VsILP064	+	+	+	+	+	+	+	+	+	-
VsILP065	+	+	+	-	-	-	-	-	-	-
VsILP066	+	+	+	+	+	-	-	-	-	-
VsILP067	+	+	-	+	+	-	+	-	-	-
VsILP068	+	+	+	-	+	-	+	-	-	+
VsILP069	+	-	-	-	-	-	-	-	-	-
VsILP070	+	+	+	-	-	+	-	-	-	-
VsILP071	+	+	+	+	+	+	+	+	+	+
VsILP072	+	+	+	+	+	-	-	-	-	+
VsILP073	+	-	-	+	-	-	-	-	-	-
VsILP075	+	+	+	+	+	-	-	-	-	-
VsILP076	+	+	+	+	-	+	-	+	+	-
VsILP077	+	+	+	+	+	+	+	-	-	-
VsILP078	+	+	+	-	-	-	-	-	-	-
VsILP079	+	-	+	-	+	-	-	-	-	-
VsILP081	+	+	+	+	+	+	+	-	-	-
VsILP082	+	+	+	+	+	+	+	-	-	-
VsILP083	+	-	-	-	-	-	-	-	-	-
VsILP084	+	-	-	-	-	-	-	-	-	-
VsILP085	+	-	-	-	-	-	-	-	-	-
VsILP086	+	+	+	+	+	-	-	-	-	-
VsILP087	+	-	-	-	-	-	-	-	-	-
VsILP088	+	-	-	-	-	+	+	-	-	-
VsILP089	+	+	+	+	+	+	+	-	-	-
VsILP090	+	+	+	+	-	+	+	-	-	-
VsILP091	+	+	+	-	-	+	+	-	-	-

VsILP092	+	+	+	-	-	-	-	-	-	-
VsILP093	+	+	+	+	+	+	+	-	-	-
VsILP094	+	-	-	-	-	-	-	-	-	-
VsILP095	+	+	-	+	+	+	+	+	-	-
VsILP096	+	+	+	-	-	+	-	-	-	-
VsILP097	+	+	+	+	+	+	-	-	-	-
VsILP099	+	+	+	-	-	-	-	-	-	-
VsILP100	+	-	-	-	-	-	-	-	-	-
VsILP101	+	+	+	+	+	-	-	-	-	-
VsILP102	+	-	-	+	-	-	-	-	+	+
VsILP103	+	-	-	-	-	+	+	-	-	-
VsILP104	+	-	-	-	-	-	-	-	-	-
VsILP105	+	+	+	-	+	-	-	-	-	-
VsILP106	+	-	-	-	-	-	-	-	-	-
VsILP107	+	+	+	+	+	-	-	-	-	-
VsILP108	+	-	-	-	-	-	-	-	-	-
VsILP109	+	+	+	+	+	+	+	-	-	-
VsILP110	+	-	-	-	-	-	-	-	-	-
VsILP111	+	+	+	+	+	+	+	+	+	+
VsILP112	+	+	+	+	+	+	+	-	-	-
VsILP113	+	-	-	-	-	-	+	+	+	+
VsILP114	+	-	-	-	-	-	-	-	-	-
VsILP115	+	-	+	-	-	-	-	-	-	-
VsILP116	+	+	+	-	+	+	-	-	-	-
VsILP117	+	-	+	-	+	-	-	-	-	-
VsILP118	+	-	-	-	-	-	-	-	-	-
VsILP119	+	+	-	-	+	-	+	-	-	-
VsILP120	+	+	+	-	+	+	-	-	-	-
VsILP121	+	-	-	-	-	-	-	+	+	+
VsILP122	+	+	+	+	+	-	-	-	-	-
VsILP123	+	-	-	-	-	-	-	-	-	-
VsILP124	+	+	+	-	-	+	-	-	-	-
VsILP125	+	-	-	-	-	+	-	-	-	-
VsILP126	+	+	-	-	-	-	-	-	-	+
VsILP127	+	+	-	-	+	-	-	-	-	-
VsILP128	+	+	-	+	+	+	-	-	-	-
VsILP129	+	+	+	-	-	-	-	-	-	-
VsILP130	+	+	+	-	-	+	-	-	-	-
VsILP131	+	+	+	+	+	-	-	-	-	-
VsILP132	+	+	+	+	+	+	+	-	-	-
VsILP133	+	+	+	+	+	+	-	-	-	-
VsILP134	+	+	+	+	+	+	+	+	+	+
VsILP135	+	+	+	-	-	-	-	-	-	-

VsILP230	+	-	-	-	-	-	-	-	-	-
VsILP231	+	+	+	-	-	-	-	-	-	-
VsILP232	+	+	+	-	-	+	-	-	-	-
VsILP233	+	+	+	+	+	+	+	+	+	+
VsILP234	+	+	+	+	+	+	+	-	-	-
VsILP235	+	+	+	-	-	-	-	-	-	-
VsILP236	+	-	-	-	-	-	-	-	-	-
VsILP237	+	+	+	+	+	+	+	-	-	-
VsILP238	+	+	+	-	-	-	-	-	-	-
VsILP239	+	+	+	-	-	+	-	-	-	-
VsILP240	+	+	+	+	+	-	-	-	-	-
VsILP241	+	+	+	+	+	+	+	-	-	-
VsILP242	+	+	+	+	+	+	-	-	-	-
VsILP243	+	+	+	+	+	+	+	+	+	+
VsILP244	+	+	+	-	-	-	-	-	-	-
VsILP245	+	-	+	-	-	-	-	-	-	-
VsILP246	+	+	+	+	-	-	+	-	-	-
VsILP247	+	-	-	-	-	-	-	-	-	-
VsILP248	+	+	+	+	+	+	-	-	-	-
VsILP249	+	-	-	-	-	-	-	-	-	-
VsILP250	+	+	+	-	-	-	-	-	-	-
VsILP251	+	+	+	+	+	+	+	+	+	-
VsILP252	+	+	-	-	+	-	-	-	-	-
VsILP253	+	-	-	-	-	-	-	-	-	-
VsILP254	+	-	-	-	-	-	-	-	-	-
VsILP255	+	-	-	-	-	-	-	-	-	-
VsILP256	+	-	-	-	-	-	-	-	-	-
VsILP257	+	-	+	+	-	-	-	-	-	-
VsILP258	+	+	+	+	+	+	-	-	-	-
VsILP259	+	-	-	-	-	-	-	-	-	-
VsILP260	+	+	+	+	+	+	+	-	-	-
VsILP261	+	+	+	+	+	+	+	-	-	-
VsILP262	+	+	+	-	+	+	-	-	-	-
VsILP263	+	+	+	+	-	+	+	-	-	-
VsILP264	+	+	+	+	+	+	+	-	-	-
VsILP265	+	+	+	-	-	+	-	-	-	-
VsILP266	+	+	+	-	-	-	-	-	-	-
VsILP267	+	-	+	-	-	+	-	-	-	-
VsILP269	+	+	+	+	+	+	+	+	+	+
VsILP270	+	-	-	-	-	-	-	-	-	-
VsILP271	+	+	+	+	-	-	-	-	-	-
VsILP272	+	-	-	-	-	-	-	-	-	-
VsILP273	+	+	+	+	+	+	+	+	+	+
VsILP274	+	+	-	-	-	-	+	+	+	+

VsILP275	+	+	-	-	-	+	-	-	-	-
VsILP276	+	+	+	+	-	-	-	-	-	-
VsILP277	+	+	-	-	-	+	+	-	-	-
VsILP278	+	+	+	+	+	+	-	-	-	-
VsILP279	+	+	-	-	-	-	-	-	-	-
VsILP280	+	+	+	-	+	-	-	-	-	-
VsILP281	+	+	+	+	-	+	+	-	-	-
VsILP282	+	-	+	+	+	+	+	+	-	-
VsILP283	+	-	-	-	-	-	-	-	-	-
VsILP284	+	-	-	-	-	-	-	-	-	-
VsILP285	+	+	+	-	-	+	-	-	-	-
VsILP287	+	+	+	+	+	-	-	+	-	+
VsILP288	+	-	-	-	+	-	-	-	-	-
VsILP289	+	+	+	+	+	+	+	+	+	+
VsILP290	+	-	-	-	-	-	+	-	-	+
VsILP291	+	+	+	+	+	+	+	-	-	-
VsILP292	+	+	-	+	-	+	+	-	-	-
VsILP293	+	+	+	-	-	+	-	-	-	-
VsILP294	+	+	+	+	+	+	+	-	-	-
VsILP295	+	+	+	+	+	+	+	-	-	-
VsILP296	+	+	+	-	+	+	-	-	-	-
VsILP297	+	+	+	-	-	+	-	-	-	-
VsILP298	+	+	-	-	+	-	-	-	-	-
VsILP299	+	+	+	-	-	+	-	-	-	-
VsILP300	+	-	-	-	-	-	-	-	-	-

+ indicates presence of marker, - indicates absence of marker

Note: Vs, *Vicia sativa*, Mt, *M. truncatula*, Ms, *M. sativa*, Gm, *Glycine max*, Lc, *Lotus corniculatus*, Mo, *Melilotus officinalis*, Sa, *Sophora alopecuroides*, At, *Arabidopsis thaliana*, Os, *Oryza sativa*, Nt, *Nicotiana tabacum*.