

## MK000058=SST-1=ASLSM1

**Marker:** SST-1=ASLSM1

**Type:** PCR

**Description:** PCR marker designed from [AY098442](#) 1-fructosyltransferase (SST-1)

**Reference:** 1. M. Ipek, A. Ipek, S. G. Almquist, P. W. Simon Demonstration of linkage and development of the first low-density genetic map of garlic, based on AFLP markers Theor Appl Genet (2005) 110: 228–236

2. submitted as "Rapid Characterization of Garlic Clones with Locus Specific DNA Markers" to the 5th International Symposium on Edible Alliaceae

**Primers:** As-SST-1-F (SST1-3flank-SSR-5).5'-TGGACAATGATGAGTACATGTCAGTCGC-3'

As-SST-1-R (SST1-3flank-SSR-3) 5'-CAGATAAATTTTGATTACAGAGAATTTGCTGTCAACTT-3'

**PCR Reaction:** (from reference 1) 25 µl: [90 ng DNA; 0.8 µM each primer=20 pMol each; 0.03 U/µl

Taq=0.75 U; 2? mM MgCl<sub>2</sub>=50 nMol; 0.2 mM each dNTP=5 nMol]

(from reference 2): 25 µl: [60 ng DNA; 0.8 µM each primer=20 pMol each; 0.05 U/µl Taq=1.25 U; 2? mM MgCl<sub>2</sub>=50 nMol; 0.2 mM each dNTP=5 nMol]

**PCR Program:** (from reference 1) 95°C 2:00; 35 cycles of {94°C 0:30; 58°C 1:00; 72°C 2:00}

(from reference 2) 95°C 2:00; 40 cycles of {94°C 0:30; 58°C 1:00; 72°C 2:00}; 72°C 5:00; 4°C hold.

**Screening Method:** Product size by 6% denaturing polyacrylamide sequencing gels containing 7.5 M urea in 1× Tris-Borate (TBE), silver staining

**Product Sizes:**

**Example:**

**Diagram of how it works:**

**Genbank reference:**

**Sequence Information:** >gi|20502036|gb|AY098442.1| Allium sativum sucrose:sucrose 1-fructosyltransferase (SST-1) mRNA, complete cds

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1 atattccag ccatttggga aatcaaaact taacaaacag aattttgttt ccgcttaagt
61 tttgttttc aacaagccat ggaattccaga gacattgaa cctctcctgc tttaaatgct
121 cctctttctc aaaccactcc tcccgtcaag agcagcaaac taaaagttgt gcttcttgc
181 atttccactt cgtcattct cgtactgcg acatttttcg ctgtaaagta ttcggtttc
241 gaatcgggta cggggttggg taaggaggat gctccagccg ccggcgacgg gtaccatgg
301 actaatgaca tgttcgaatg gcagaggcct ggtaaccatt tcaaccacc ttaccattc
361 atgggcgatc ccaatgctgc aatgtactac aaaggatggt accacttctt ttaccagtac
421 aaccgtaog gctcggcctg ggacaccacc atctcatggg cccatgcggt ctccaaggac
481 atgatccact ggctgcatct tcccacogcc atggtgcctg accattggta cgacagcaag
541 ggggtctggt ccgggtatgc caccacocct cctgatgggc gcatcatcgt cctgtacac
601 gggggtcccg acgagctcgt ccaggtccag aacctcgtg agcccgccga tccatctgac
661 cccctcctga tcgaatggaa gaaatccaac cacaatcca tcctcatgcc acctcccga
721 gttggccccc acgacttccg tgaccattc cccgtttggt acaacgagtc tgattccaat
781 tggcacatgc ttatcggatc caaggacgac aaccattacg gactgtgct catctacct
841 actaaagatt tcaaaaacta cacgcttctc cccgagatgt tgcataagac caaggacaat
901 gtaggtatgc tcgagtgtgt ggatctgtac cctgtagcta caactggaaa ccagatcggg
961 aacgggcttg aaatgcaggt cgggttcgga aaggggatca agcatgtgct taaggcgagc
1021 atggacgatg agaggcacga ttactatgct attggaactt ttgatctgga atcttttacc
1081 tgggttccgg atgatgatac tattgacggt ggtgttggat tgagatacga ctatgggaag
1141 ttttatgcat caaagacatt ttatgatcaa gagaagagga ggaggatctt gtggggttat
1201 gttggagagg ttgatagtaa aaccgatgat gctcgttaag gatgggctaa tgttctgaa
1261 attgctagaa ctatattggt tgatgtgaag actagaagca accttttggg gtggccggta
1321 gaggagcttg atgcacttag gacttcaagc aaagaattta atggagttgt tgcgaaccc
1381 ggcttcaactt accatcttga cgttggcact gcatctcagc ttgacattga agcagagttt
1441 gaaatcaacc aagaagctgt ggatgctggt gtcgaagcag atgtaactta caactgtagc
1501 acaagcgatg gttcagctca ccgcccggct ctcggaccgt ttggtttggt ggtgcttgca
1561 aatgaaaaaa tgacggagaa gacagcaact tacttctatg tttagcaggac cgttggatgg
1621 ggtttgcaga cacacttttg ccaggatgaa ttaagatcgt ccaaagctaa tgacattacg
1681 aaaagagtgg tcggccacac cgttccagtt ctccatggcg agacatttcc attgagaata
1741 ctggttgatc attctattgt ggagatgttt gcgcaaaagg gaagagcagt ggctacgtct
1801 cgtgtatata caacagaggc gatattcgat tcaactcgaa ttttctttt taacaacgcg
1861 actagtgcata cacttacggc caaaagtgtg aagatatggc atatgaattc taccataaac
1921 catccgttcc ctggatttcc atttccctga aggagtcctt aggatggtat tgtgttgttt
1981 acgtggctgt attgtagtac gtacgctatt gtattgtttg gttaggggta caagtaagat
2041 ttagatgttt tccttatttg atgagtccga ctatgtgggt taatataaaa atcttttcta
2101 gtgtttgggc tatcaagcta aataagcaaa cagatctcat gtacactagg aattgttaaa
2161 tttgtccctc ggttcatggt tatgttaatg atatgtcttc ggtaagatg ctttaaaaaa
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<http://www.vcru.wisc.edu/simonlab/sdata/MK000058.pdf>

2221 aaaaaaaaaa aaaaaaaaaa a

**Map Location:** Map: MP1; [Linkage Group: ii](#); Position: 15 cm; Map: MP2; [Linkage Group: vi](#);  
Position: 26 cm

**Published Reference:**

**Other Information:**

**Primer Location (lab specific):** SST1-3flank-SSR-5@Bx6:I6; SST1-3flank-SSR-3@Bx6:A7

**PCR Program Name (lab specific):**