

MK000059=alliinase=ASLSM2

Marker: alliinase=ASLSM2

Type: PCR

Description: PCR marker designed from [AF409953](#) Allium sativum root-type alliinase mRNA, partial cds

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-Alliinase-F (AlliSSR MAP5')..5'-CTCAACTCATCCATGGACTCGTCATCTCT-3'

As-Alliinase-R (Alli-SSR-1)5'-GATCGTACGTTAGATCGATGTGTGC-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 MgCl₂=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 MgCl₂=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: Part of polyacrylamide gel of ASLSM2. M is molecular weight markers. Roman numerals within the parentheses are the AFLP groups assigned by Ipek et al. (2003).

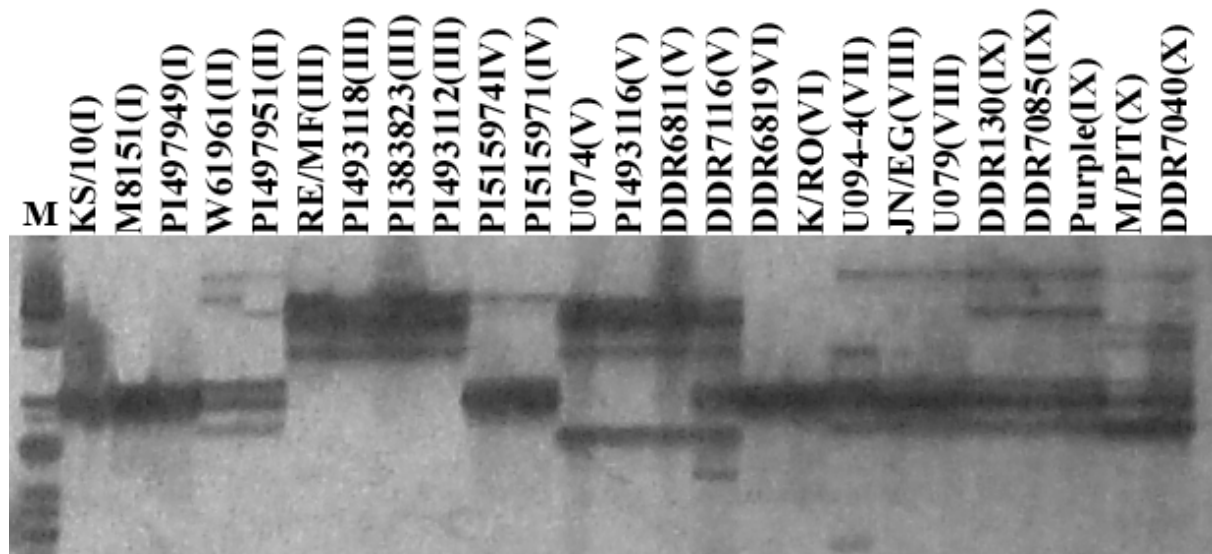


Diagram of how it works:

Genbank reference:

Sequence Information: >gi|15341545|gb|AF409953.1|AF409953 Allium sativum root-type alliinase mRNA, partial cds

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1 ctttcaacca tcttccgcta atatcatcaa tgccgagctt gaaaaacacg tcagactttt
61 acatcaggcc gtcggcaacg ccaaagccga tgacaagtac atcgtcttcg gtaccggcgt
121 cactcaactt ctcaacggtc tagttatcgc actttcacca aacgatatcg acgtgcaacc
181 ggctaaagtt gtcgcgcgtg tcccctacta ccctgtgttc agaaaacaaa ccaagttctt
241 tcgttttacc ggttacgaat ggaaaggcaa cgcataccgac tacgtaaaaca ccgcctctcc
301 tcaaaaacatc atagaattgg tgacttcccc taataacccc gaaggccgat tccaccatc
361 aattatcaat ggctccctag caatccatga ccacgtctac tattggccgc attatacccc
421 aattgcacaa cccgccgacg aagatatcat gttgttttcc atgtocaaat tcaactggaca
481 ctccggtagc agattcgggt gggcgctcat caaggacgtg aaagtgtacg acaaggtcat
541 ggagtacatg accgagaaca cggaaaggaaac ttcccacgat acgcaactc gaaccttgaa
601 attaataaaa gagatthtgt tgcaaatgaa aacgaaacgg gaaacaaccg ccgacatcaa
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<http://www.vcru.wisc.edu/simonlab/sdata/MK000059.pdf>

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661 ccaattcggc tatcaaacgt tatctaagag atgggctgaa cttaccaagc tagttgcatc
721 ttcggatcga ttctcccttc aaaacctctc cccgcagtat tgcaactact tcggaaaagt
781 tagagatccc tcaccatcat tcggatggct aaagtgtgaa tgggagcaag atacggattg
841 tgaagctcta cttaggagtg cacaaatcaa aactcaaagc ggagtgcctt ttgaagccga
901 tagtcgttac acacgtttga gtttaatcaa gacagatgac gatttcgac aaatgatgga
961 gaagttgaag cctctgttac atgcacaaag gagcatttga aactacata taatTTTTTc
1021 cattcattta tcagcacatt tattcaccaa aaggaagcat ggaccaatto tacagatcat
1081 ccttgctcat ggctgacgta tataccttct tttttttttt tttttttttt tattttatga
1141 ttctgtaat tattttatta tttgtgttat ttcattcttt attataccac caccatttgc
1201 gatggatggt agtttgttat atatgtacc tttataaaat aagaataaac gaagccaaat
1261 taattatctt gctaaaaaaaa aaaaaaa
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Map Location: Map: MP1; [Linkage Group: alliinase](#); Position: 6 cm; Map: MP2; [Linkage Group: alliinase](#); Position: 13 cm

Published Reference:

Other Information:

Primer Location (lab specific): AlliSSR MAP5'@Bx6:I4; Alli-SSR-1@Bx6:A5

PCR Program Name (lab specific):