Table S1. Information of newly developed twenty SNP markers related to various diseases resistance and leaf traits in Chinese cabbage

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| --- | --- | --- | --- | --- | --- |
| primer name | SubmitterSNP ID (dbSNP) | dbSNP ID1) | SNP type2) | Gene ID(NCBI) | Primer sequence |
| LSNP4 | NIHHS\_LSNP\_0019 | 550898709 | A/G | Q6EMB3\_ARATH | F | CGTAATTGGGCTTCTAGCGA |
|  |  |  |  |  | R | GGTCCTTGTCATCCTCCTCA |
| LSNP10 | NIHHS\_LSNP\_0040 | 550898730 | C/T | Q5IRX3\_ARATH | F | AGGTGGTTGCATGGAGAAGT |
|  |  |  |  |  | R | GCTTACAGCGAGTGACACCA |
| LSNP11 | NIHHS\_LSNP\_0045 | 550898735 | A/G | TBG1\_ARATH | F | ACGCAGTCAGCGTTTAAGGT |
|  |  |  |  |  | R | TGGGCTCTTACCTCTTGGAG |
| LSNP12 | NIHHS\_LSNP\_0046 | 550898736 | G/T | TBG1\_ARATH | F | AAGGCTGTCACTCCCATCAG |
|  |  |  |  |  | R | CCAGTGGCTATCACCAGGTT |
| LSNP15 | NIHHS\_LSNP\_0063 | 550898753 | T/C | Q0WR11\_ARATH | F | CGCTGTCGGGTCTACAAGAT |
|  |  |  |  |  | R | CTTGAGGATGGGGGTTGATA |
| LSNP17 | NIHHS\_LSNP\_0065 | 550898755 | G/A | Q5IRX8\_ARATH | F | AGCTCCTGACAAGGTGGTTG |
|  |  |  |  |  | R | GCACTCACGGTGGATTCTCT |
| LSNP19 | NIHHS\_LSNP\_0079 | 550898769 | A/G | Q940Y8\_ARATH | F | GAACCTATGGGAGTCCACGA |
|  |  |  |  |  | R | GCATTGGCATGTCTCTTGAC |
| LSNP20 | NIHHS\_LSNP\_0080 | 550898770 | C/T | Q940Y8\_ARATH | F | GAGACATGCCAATGCCTGAT |
|  |  |  |  |  | R | ACGATGTTCATGGCATCCTC |
| LSNP21 | NIHHS\_LSNP\_0081 | 550898771 | G/A | Q940Y8\_ARATH | F | AGGATGCCATGAACATCGTG |
|  |  |  |  |  | R | GTTTCCAGGCTGGTCTGCT |
| LSNP26 | NIHHS\_LSNP\_0005 | 550898695 | A/T | Q8H2D4\_ARATH | F | CCGCTGGGATTAGGTACTGT |
|  |  |  |  |  | R | ATCGGTTCCTCCTCTCAGGT |
| LSNP27 | NIHHS\_LSNP\_0006 | 550898696 | A/C | Q8H2D4\_ARATH | F | TGGGTAATGATCTTCCTCCG |
|  |  |  |  |  | R | TCCACAAACCGTCTCTTTCC |
| LSNP28 | NIHHS\_LSNP\_0007 | 550898697 | C/T | CRF2\_ARATH | F | AGTTTCGAAGACGACGGAGA |
|  |  |  |  |  | R | TCGTCGGGAAGTTAGTGAGG |
| LSNP38 | NIHHS\_LSNP\_0089 | 550898779 | G/A | Q9FKH3\_ARATH | F | CCCGAACCAAATTGAGAACC |
|  | NIHHS\_LSNP\_0090 | 550898780 | G/A | Q9FKH3\_ARATH | R | GGTCGGTTCCGACAGATAAT |
| LSNP40 | NIHHS\_LSNP\_0096 | 550898786 | C/T | Q84YI4\_ARATH | F | TTTCAGTGAGCTCTTGTGGG |
|  | NIHHS\_LSNP\_0097 | 550898787 | C/T | Q84YI4\_ARATH | R | GAGACTCACTCACACCATCCC |
| LSNP45 | NIHHS\_LSNP\_0112 | 550898802 | G/A | RAVL3\_ARATH | F | TGGGTTCTTCATCTCTTCGG |
|  | NIHHS\_LSNP\_0113 | 550898803 | T/G | RAVL3\_ARATH | R | CCCATGGTCTGATTTAACGG |
| LSNP46 | NIHHS\_LSNP\_0017 | 550898807 | T/A | O64691\_ARATH | F | TTGCAGGAGGAGGGTAACAC |
|  | NIHHS\_LSNP\_0118 | 550898808 | G/A | O64691\_ARATH | R | CAGAGCACGAGTTTCTGCTG |
| LSNP51 | NIHHS\_LSNP\_0050 | 550898740 | T/A | ERF70\_ARATH | F | AGAAGTTCCGTGGAGTGAGG |
|  | NIHHS\_LSNP\_0051 | 550898741 | C/G | ERF70\_ARATH | R | GAGGACCAATCAGCTGAACC |
|  | NIHHS\_LSNP\_0052 | 550898742 | G/C | ERF70\_ARATH |  |  |
| LSNP53 | NIHHS\_LSNP\_0060 | 550898750 | T/C | RBR1\_ARATH | F | TGGAGATGGATGTCTCGTCC |
|  | NIHHS\_LSNP\_0061 | 550898751 | T/C | RBR1\_ARATH | R | AAGCCATCTTCAGCATCCAC |
|  | NIHHS\_LSNP\_0062 | 550898752 | T/C | RBR1\_ARATH |  |  |
| LSNP60 | NIHHS\_LSNP\_0098 | 550898788 | C/T | Q84YI4\_ARATH | F | TGGGAACCCAAGTTCACAGT |
|  | NIHHS\_LSNP\_0099 | 550898789 | A/G | Q84YI4\_ARATH | R | CGTTCCTGCAAGTCAAATGG |
|  | NIHHS\_LSNP\_0100 | 550898790 | T/C | Q84YI4\_ARATH |  |  |
| LSNP61 | NIHHS\_LSNP\_0114 | 550898804 | G/A | Q9FLU1\_ARATH | F | CCCCATGTCTCCACTCAGAT |
|  | NIHHS\_LSNP\_0115 | 550898805 | G/C | Q9FLU1\_ARATH | R | GGCTCAAGTTCAAAGTTGCC |
|  | NIHHS\_LSNP\_0116 | 550898806 | A/G | Q9FLU1\_ARATH |  |  |

1) dbSNP ID : The number of SNP ID registered in NCBI dbSNP (<http://www.ncbi.nlm.nih.gov/SNP/>)

2) SNP type : variation between newly developed twenty SNP primers sequence and the sequence data of *B. rapa* genome registered in NCBI database