Supplementary: Evolution and Expression Characteristics of Receptor-Like Cytoplasmic Protein Kinases in *Maize*, *Rice* and *Arabidopsis*

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**Table S1.** The information of Gene ID, chromosomal location and intron numbers of RLCKs in maize. The related information of genes was searched from recent reports and Maize GDB in maize. The intron numbers were retrieved in Ensembl Genomes.

|  |  |  |  |
| --- | --- | --- | --- |
| Gene ID | Chromosome | Chromosomal location | Intron number |
| GRMZM2G355450 | 1 | 35020494-35022741 | 0 |
| GRMZM2G046848 | 1 | 89157835-89163331 | 8 |
| GRMZM2G153945 | 1 | 198655421-198659835 | 7 |
| AC217300.3\_FG | 1 | 43615431-43621104 | 4 |
| GRMZM2G109566 | 1 | 7063949-7068108 | 4 |
| GRMZM2G125762 | 1 | 246673889-246679191 | 5 |
| GRMZM2G152901 | 1 | 240404326-240407505 | 3 |
| GRMZM2G175164 | 1 | 16842863-16848389 | 3 |
| GRMZM2G046297 | 1 | 63928070-63930264 | 2 |
| GRMZM2G101245 | 1 | 211229817-211232387 | 2 |
| GRMZM2G142390 | 1 | 72028758-72032846 | 2 |
| GRMZM2G068117 | 1 | 299188671-299193386 | 5 |
| GRMZM2G406601 | 1 | 15685183-15686574 | 1 |
| GRMZM2G087459 | 1 | 40787428-40790568 | 4 |
| GRMZM2G076423 | 1 | 12375052-12378601 | 5 |
| GRMZM2G119521 | 1 | 238750631-238752896 | 1 |
| GRMZM2G014366 | 1 | 5491457-5495322 | 6 |
| GRMZM2G176604 | 1 | 5491457-5495312 | 6 |
| GRMZM2G043470 | 1 | 30559326-30563850 | 4 |
| GRMZM2G181231 | 1 | 227366006-227368028 | 0 |
| GRMZM2G159992 | 1 | 110378380-110389175 | 6 |
| GRMZM2G026767 | 1 | 86770176-86776444 | 8 |
| GRMZM2G099598 | 1 | 7394883-7399605 | 8 |
| GRMZM2G169080 | 1 | 100085714-100090833 | 9 |
| GRMZM2G380227 | 1 | 200023869-200026523 | 5 |
| GRMZM2G177445 | 1 | 300057445-300062971 | 9 |
| GRMZM5G818431 | 1 | 32857576-32861916 | 6 |
| GRMZM2G114899 | 1 | 302328669-302332797 | 7 |
| GRMZM2G043799 | 1 | 10854114-10859532 | 5 |
| GRMZM2G055957 | 2 | 32540005-32544548 | 6 |
| GRMZM2G050861 | 2 | 53484383-53488254 | 6 |
| GRMZM2G007283 | 2 | 155301258-155306324 | 5 |
| GRMZM2G018059 | 2 | 50696434-50701184 | 6 |
| GRMZM2G471395 | 2 | 85504775-85506430 | 2 |
| GRMZM2G352281 | 2 | 94749230-94752775 | 4 |
| GRMZM2G349344 | 2 | 19414112-19420375 | 8 |
| GRMZM2G001668 | 2 | 174563828-174573555 | 6 |
| GRMZM2G015889 | 2 | 68587556-68592566 | 4 |
| GRMZM2G063533 | 2 | 202081304-202085828 | 3 |
| AC212835.3\_FG | 2 | 22298801-22300512 | 3 |
| GRMZM2G051984 | 2 | 36102005-36106012 | 5 |
| GRMZM2G059740 | 2 | 4479443-4481492 | 1 |
| GRMZM2G076212 | 2 | 4431371-4433466 | 2 |
| GRMZM2G363066 | 2 | 4339356-4340894 | 1 |
| GRMZM2G150806 | 2 | 181872601-181877999 | 5 |
| GRMZM2G026301 | 2 | 163239922-163244823 | 7 |
| GRMZM2G168917 | 2 | 23112941-23114451 | 0 |
| GRMZM2G086577 | 2 | 4638970-4646084 | 5 |
| GRMZM2G142544 | 2 | 169619011-169623650 | 8 |
| GRMZM2G070961 | 3 | 224412744-224415725 | 5 |
| GRMZM2G161380 | 3 | 155956188-155960323 | 7 |
| GRMZM2G378547 | 3 | 58717043-58721522 | 7 |
| GRMZM2G346132 | 3 | 169649436-169653579 | 6 |
| GRMZM2G074381 | 3 | 37092813-37099056 | 4 |
| GRMZM2G335046 | 3 | 144476744-144477922 | 0 |
| GRMZM2G145709 | 3 | 155343255-155349107 | 6 |
| GRMZM2G091338 | 3 | 189536953-189538986 | 2 |
| GRMZM2G028037 | 3 | 225197920-225203269 | 6 |
| GRMZM2G034855 | 3 | 58480197-58484905 | 6 |
| GRMZM2G031400 | 3 | 214836511-214840264 | 7 |
| GRMZM2G068151 | 3 | 187651697-187655271 | 3 |
| GRMZM2G020915 | 4 | 186396699-186398119 | 0 |
| GRMZM2G140095 | 4 | 101589296-101597231 | 4 |
| GRMZM2G301513 | 4 | 235519093-235520318 | 1 |
| GRMZM2G301647 | 4 | 178304977-178308276 | 4 |
| GRMZM2G010488 | 4 | 157102240-157105817 | 5 |
| GRMZM2G105933 | 4 | 125336671-125339106 | 1 |
| GRMZM2G025127 | 4 | 245166373-245170503 | 5 |
| GRMZM2G042380 | 4 | 173977547-173982005 | 4 |
| GRMZM2G101687 | 4 | 154123890-154127016 | 2 |
| GRMZM2G073359 | 4 | 158063117-158065646 | 5 |
| GRMZM2G101754 | 4 | 173015140-173019293 | 6 |
| GRMZM2G099754 | 4 | 188525229-188530185 | 0 |
| GRMZM2G180775 | 4 | 153285690-153287274 | 1 |
| GRMZM2G163328 | 4 | 245923058-245925026 | 1 |
| GRMZM2G473411 | 4 | 173753513-173755232 | 2 |
| GRMZM2G125308 | 4 | 239886500-239888648 | 3 |
| GRMZM2G032337 | 4 | 212685378-212689960 | 10 |
| GRMZM2G048635 | 4 | 4785787-4789334 | 4 |
| GRMZM2G121715 | 5 | 2166748-2169144 | 5 |
| GRMZM2G159047 | 5 | 69615896-69617739 | 2 |
| GRMZM2G166719 | 5 | 22863385-22865343 | 1 |
| GRMZM2G169558 | 5 | 195387292-195388884 | 1 |
| GRMZM2G127984 | 5 | 179261732-179264249 | 7 |
| GRMZM2G137468 | 5 | 168785065-168791287 | 3 |
| GRMZM2G364172 | 5 | 221858646-221868145 | 3 |
| GRMZM2G158045 | 5 | 62838718-62841688 | 4 |
| GRMZM2G414899 | 5 | 59818499-59820642 | 2 |
| GRMZM2G055154 | 5 | 65523069-65526303 | 6 |
| GRMZM2G144042 | 5 | 2364265-2370543 | 4 |
| GRMZM2G110968 | 5 | 37785958-37788104 | 4 |
| GRMZM2G156824 | 5 | 72078215-72082309 | 5 |
| GRMZM2G166027 | 5 | 217590475-217592659 | 4 |
| GRMZM2G040964 | 5 | 175249948-175253741 | 6 |
| GRMZM2G037308 | 5 | 96005346-96009145 | 9 |
| GRMZM2G118939 | 5 | 99285143-99288586 | 3 |
| GRMZM2G121826 | 5 | 2173184-2178564 | 6 |
| GRMZM2G148962 | 5 | 1573730-1579082 | 7 |
| GRMZM2G061596 | 5 | 54404461-54406699 | 4 |
| GRMZM5G835629 | 6 | 141447130-141450518 | 3 |
| GRMZM2G381076 | 6 | 28516259-28520016 | 0 |
| GRMZM2G050701 | 6 | 96573519-96580085 | 7 |
| GRMZM2G146305 | 6 | 89229619-89232300 | 5 |
| AC234171.1\_FG | 9 | 130019770-130021645 | 2 |
| GRMZM2G373435 | 6 | 112673176-112675478 | 3 |
| GRMZM2G010953 | 6 | 167702222-167706547 | 6 |
| GRMZM2G162702 | 6 | 138953327-138958838 | 2 |
| GRMZM2G171210 | 6 | 99390300-99393616 | 5 |
| GRMZM2G066432 | 6 | 156292403-156294916 | 4 |
| GRMZM2G133566 | 6 | 83034404-83037596 | 3 |
| GRMZM5G871928 | 6 | 31151359-31152962 | 4 |
| GRMZM2G471779 | 7 | 54089198-54093287 | 4 |
| GRMZM2G092550 | 7 | 109309083-109325401 | 8 |
| GRMZM2G029530 | 7 | 143640526-143645297 | 7 |
| GRMZM2G071877 | 7 | 39145451-39159208 | 8 |
| GRMZM2G048210 | 7 | 178728980-178733982 | 5 |
| GRMZM5G879570 | 7 | 148332449-148337057 | 4 |
| GRMZM2G004207 | 7 | 121815664-121817633 | 3 |
| GRMZM2G127031 | 7 | 170886190-170889860 | 3 |
| GRMZM2G132184 | 7 | 100359175-100364355 | 4 |
| GRMZM2G091919 | 7 | 147952084-147953976 | 3 |
| GRMZM2G351941 | 8 | 135478513-135481446 | 1 |
| GRMZM2G012966 | 8 | 143020563-143027781 | 9 |
| AC233953.1\_FG | 8 | 164359286-164361050 | 6 |
| GRMZM2G343024 | 8 | 133390893-133396135 | 7 |
| GRMZM2G085038 | 8 | 271252-367057 | 4 |
| GRMZM2G140590 | 8 | 117765242-117779389 | 3 |
| GRMZM2G037585 | 8 | 164313713-164318382 | 4 |
| GRMZM2G139223 | 8 | 177053620-177055732 | 2 |
| GRMZM2G043069 | 8 | 124481690-124483802 | 4 |
| GRMZM2G168416 | 8 | 161465722-161467167 | 1 |
| GRMZM2G047588 | 8 | 137997924-138001492 | 3 |
| GRMZM2G147051 | 8 | 103220084-103223076 | 5 |
| GRMZM2G017386 | 8 | 150402835-150407178 | 7 |
| GRMZM2G090732 | 8 | 120111899-120114860 | 4 |
| GRMZM2G433433 | 9 | 20628842-20630538 | 2 |
| GRMZM2G305822 | 9 | 84217258-84220276 | 5 |
| GRMZM2G165433 | 9 | 11221616-11224738 | 3 |
| GRMZM2G009869 | 9 | 154764022-154768424 | 4 |
| GRMZM2G178787 | 9 | 154446529-154450626 | 7 |
| GRMZM2G157115 | 9 | 111942982-111948528 | 4 |
| AC149810.2\_FG | 9 | 154782703-154785295 | 5 |
| GRMZM2G147373 | 9 | 130019770-130022099 | 2 |
| GRMZM2G055982 | 9 | 9516937-9519607 | 3 |
| GRMZM2G007801 | 9 | 15660933-15662836 | 2 |
| GRMZM2G317938 | 9 | 156831913-156836021 | 7 |
| GRMZM2G478876 | 9 | 144527869-144532705 | 5 |
| GRMZM2G431524 | 9 | 92553820-92557300 | 9 |
| GRMZM2G338376 | 9 | 111065404-111066906 | 2 |
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| GRMZM2G365319 | 10 | 55246068-55249896 | 9 |
| GRMZM2G149943 | 10 | 48629503-48631730 | 0 |
| GRMZM2G061447 | 10 | 86464808-86469142 | 6 |
| GRMZM2G142832 | 10 | 139063732-139068557 | 5 |
| GRMZM2G007477 | 10 | 146944754-146946716 | 0 |
| GRMZM2G308365 | 10 | 146938274-146939628 | 0 |
| GRMZM2G481531 | 10 | 66206197-66207648 | 1 |
| GRMZM2G061537 | 10 | 129941495-129946469 | 5 |
| GRMZM2G418432 | 10 | 10863111-10866049 | 6 |