

S4 Figure

Polymorphism at the polyphenol oxidase gene linked to BB and blast resistance genes at the *Xo1* locus

a)

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CGS_nonfunctional_PPO 1 MESINVAPGTTATPRMAPP... 60
MH63_functional_PPO 1 MESINVAPGTTATPRMAPP... 60

CGS_nonfunctional_PPO 61 LLGISGAAAMVATOGGGG... 120
MH63_functional_PPO 61 LLGISGAAAMVATOGGGG... 120

CGS_nonfunctional_PPO 121 APPPASSPLRVRPAHL... 180
MH63_functional_PPO 121 APPPASSPLRVRPAHL... 180

CGS_nonfunctional_PPO 181 QVGFPGLEIQIHSCWLF... 240
MH63_functional_PPO 181 QVGFPGLEIQIHSCWLF... 240

CGS_nonfunctional_PPO 241 ANRWSPLYDPRRQAHL... 300
MH63_functional_PPO 241 ANRWSPLYDPRRQAHL... 300

CGS_nonfunctional_PPO 301 MGOPYRAGDQPEPGAG... 360
MH63_functional_PPO 301 MGOPYRAGDQPEPGAG... 360

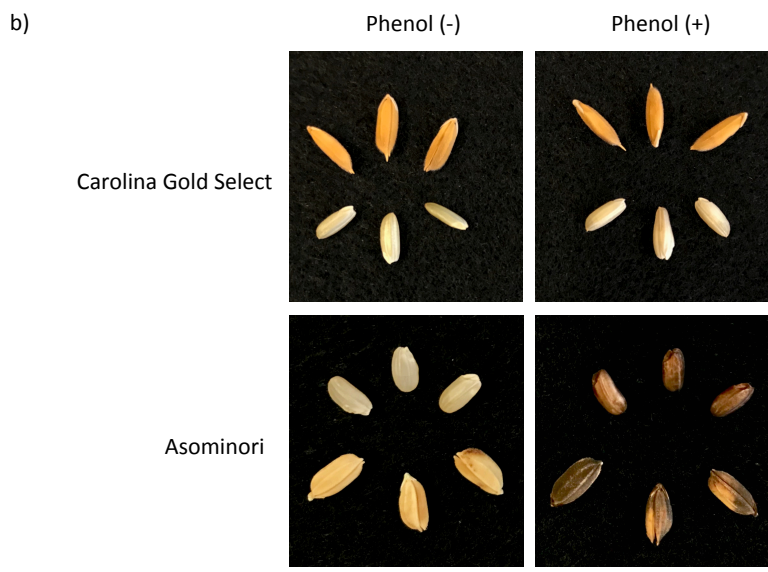
CGS_nonfunctional_PPO 361 DRMWHI... 410
MH63_functional_PPO 361 DRMWHI... 420

CGS_nonfunctional_PPO 411 PVAERQAVHGSSQHAG... 452
MH63_functional_PPO 421 PHLNAKPSGAASTPA... 480

CGS_nonfunctional_PPO 453 P... 494
MH63_functional_PPO 481 PDHSTYVKFDVFNAP... 539

CGS_nonfunctional_PPO 495 VRGDVRRQRAGAARD... 554
MH63_functional_PPO 540 LLDDI... 572

CGS_nonfunctional_PPO 555 GHRRRRQHRLR 565
MH63_functional_PPO 573 GYAK... 576
    
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(a) Amino acid sequence alignment of *Oryza sativa* indica cultivar MH63 functional polyphenol oxidase (PPO) gene with the sequence of Carolina Gold Select PPO. Loss-of-function mutation highlighted in yellow. (b) Polyphenol oxidase activity in seeds of the known PPO positive rice cultivar Asominori and Carolina Gold Select with and without hull. Dark brown indicates activity.