

**Table S4.** The avirulence(A) /virulence(V) formula of the *Pst* races used in the present study [58].

Race name	Virulence or avirulence formula on <i>Yr</i> genes
CYR32	V: <i>Yr1, Yr2, Yr3, Yr4, Yr6, Yr7, Yr8, Yr9, Yr11, Yr12, Yr13, Yr14, Yr16, Yr17, Yr18, Yr25, Yr27, Yr28, Yr29, Yr30, Yr31, Yr32, Yr43, Yr44, YrExp2, YrSp, Yr76, YrV23, YrA</i> A: <i>Yr5, Yr10, Yr15, Yr19, Yr24, Yr26, Yr32, YrTr1, YrTye</i>
CYR33	V: <i>Yr1, Yr2, Yr3, Yr4, Yr6, Yr7, Yr8, Yr9, Yr11, Yr12, Yr13, Yr14, Yr16, Yr17, Yr18, Yr25, Yr27, Yr28, Yr29, Yr30, Yr31, Yr32, Yr43, Yr44, YrExp2, YrA, YrSk, YrSp</i> A: <i>Yr5, Yr10, Yr15, Yr19, Yr24, Yr26, Yr32, YrTr1</i>
CYR34	V: <i>Yr1, Yr2, Yr3, Yr4, Yr6, Yr7, Yr8, Yr9, Yr10, Yr11, Yr12, Yr13, Yr14, Yr16, Yr17, Yr18, Yr19, Yr24, Yr25, Yr26, Yr27, Yr28, Yr29, Yr30, Yr31, Yr32, Yr43, Yr44, YrExp2, YrA, YrSk, YrSp, YrTye</i> A: <i>Yr5, Yr15, Yr32, YrTr1</i>
G22–14	V: <i>Yr1, Yr2, Yr3, Yr4, Yr6, Yr7, Yr8, Yr9, Yr10, Yr11, Yr12, Yr13, Yr14, Yr16, Yr19, Yr20, Yr24, Yr26</i> A: <i>Yr3b, Yr4b, Yr5, Yr15, Yr17, Yr18</i>
Su11–4	V: <i>Yr1, Yr2, Yr3, Yr4, Yr6, Yr7, Yr8, Yr9, Yr13, Yr14, Yr16, Yr18, Yr28, Yr29, Yr31, Yr43, Yr44, YrExp2</i> A: <i>Yr5, Yr10, Yr11, Yr12, Yr15, Yr17, Yr19, Yr24, Yr26, Yr27, Yr32, YrSp, YrTr1</i>
Su11–5	V: <i>Yr1, Yr2, Yr3, Yr4, Yr6, Yr7, Yr8, Yr9, Yr11, Yr14, Yr16, Yr18, Yr28, Yr29, Yr31, Yr43, Yr44, YrExp2, YrSp</i> A: <i>Yr5, Yr10, Yr12, Yr13, Yr15, Yr17, Yr19, Yr24, Yr26, Yr27, Yr32, YrTr1</i>
Su11–7	V: <i>Yr1, Yr2, Yr3, Yr4, Yr6, Yr7, Yr8, Yr9, Yr11, Yr12, Yr14, Yr16, Yr17, Yr18, Yr28, Yr29, Yr31, Yr43, Yr44, YrExp2, YrSp</i> A: <i>Yr5, Yr10, Yr13, Yr15, Yr17, Yr19, Yr24, Yr26, Yr27, Yr32, YrTr1</i>