

Table S1. Predicted *Puccinia striiformis* f. sp. *tritici* race 6E22A+ adult plant resistance quantitative trait loci (QTL) retained by selected Palmiet x Yr16DH70 F₈ recombinant inbred lines (RILs), scanned for all DNA markers across each QTL interval.

ID Name ¹	<i>QYr.ufs-2A</i>			<i>QYr.ufs-2D</i>			<i>QYr.ufs-5B</i>			<i>QYr.ufs-6D</i>				Predicted QTL ²
	WMC407	WMC177	GWM636 ³	WMC245 ³	GWM539	WMC18	GWM371	GWM335 ³	BARC74	GWM325 ³	BARC175	CFD47	BARC202	
Palmiet#1	131	190	80	147	136	245	182	218	177	143	223	176	308	4B
Palmiet#2	131	190	80	147	136	245	182	218	177	143	223	176	308	
Yr16DH70#1	135	192	108	149	134	221	186	210	180	141	226	191	304	2A+2D+5B+6D
Yr16DH70#2	135	192	108	149	134	221	186	210	180	141	226	191	304	
RIL 20#1_F ₈	135	192	108	149	134	221	186	210	180	141	226	191	304	2A+2D+5B+6D
RIL 20#2_F ₈	135	192	108	149	134	221	186	210	180	141	226	191	304	
RIL 148#1_F ₈	135	192	108	149	134	221	186	210	180	141	226	191	304	2A+2D+5B+6D
RIL 148#2_F ₈	N/A	N/A	108	149	N/A	N/A	186	210	180	141	226	191	304	
RIL 39#1_F ₈	135	190	108	149	134	221	186	210	180	143	223	176	308	2A+2D+5B
RIL 39#2_F ₈	135	190	108	149	134	221	186	210	180	143	223	176	308	
RIL 34#1_F ₈	135	192	108	149	134	221	182	218	177	141	226	191	304	2A+2D+6D
RIL 34#2_F ₈	135	192	108	149	134	221	182	218	177	141	N/A	191	304	
RIL 142#1_F ₈	135	192	108	149	134	221	182	218	177	141	226	191	304	2A+2D+6D
RIL 142#2_F ₈	135	192	108	149	134	221	182	218	177	141	226	191	304	
RIL 33#1_F ₈	135	192	108	147	136	245	186	210	180	141	226	191	304	2A+5B+6D
RIL 33#2_F ₈	135	192	108	147	136	245	186	210	180	141	226	191	304	
RIL 10#1_F ₈	135	192	108	149	134	221	182	218	177	143	223	176	308	2A+2D
RIL 10#2_F ₈	135	192	108	149	134	221	182	218	177	143	223	176	308	
RIL 144#1_F ₈	135	192	108	147	136	245	182	218	177	141	226	191	304	2A+6D
RIL 144#2_F ₈	135	192	108	147	136	245	182	218	177	141	226	191	304	
RIL 153#1_F ₈	131	192	80	149	134	221	186	210	180	143	223	176	308	2D+5B
RIL 153#2_F ₈	131	192	80	149	134	221	186	210	180	143	223	176	308	
RIL 17#1_F ₈	131	192	80	149	134	221	182	218	177	141	226	191	304	2D+6D
RIL 17#2_F ₈	131	192	80	149	134	221	182	218	177	141	226	191	304	
RIL 45#1_F ₈	131	190	80	147	136	245	N/A	210	180	141	226	191	304	5B+6D
RIL 45#2_F ₈	131	190	80	147	136	245	N/A	210	180	141	226	191	304	
RIL 112#1_F ₈	135	192	108	147	136	245	182	218	177	143	223	176	308	2A
RIL 112#2_F ₈	135	192	108	147	136	245	182	218	177	143	223	176	308	

Table S1. (continued) Predicted *Puccinia striiformis* f. sp. *tritici* race 6E22A+ adult plant resistance QTL retained by selected Palmiet x Yr16DH70 F₈ RILs, scanned for all DNA markers across each QTL interval.

RIL 178#1_F ₈	135	192	108	147	136	245	182	218	177	143	223	176	308	
RIL 178#2_F ₈	135	192	108	147	136	245	182	218	177	143	223	176	308	2A
RIL 15#1_F ₈	131	190	80	149	134	221	182	218	177	143	223	176	308	
RIL 15#2_F ₈	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2D
RIL 190#1_F ₈	131	190	80	149	134	221	186	218	177	143	223	176	308	
RIL 190#2_F ₈	131	190	80	149	134	221	N/A	N/A	177	143	223	176	N/A	2D
RIL 31#1_F ₈	131	190	80	147	136	245	N/A	210	180	143	223	176	308	
RIL 31#2_F ₈	131	190	80	147	136	245	N/A	210	180	143	223	176	308	5B
RIL 149#1_F ₈	131	190	80	147	134	245	182	218	177	141	226	191	304	
RIL 149#2_F ₈	131	190	80	147	134	245	182	218	177	141	226	191	304	6D
RIL 52#1_F ₈	131	192	80	147	136	245	182	218	177	143	223	176	308	
RIL 52#2_F ₈	131	192	80	147	136	245	182	218	177	143	223	176	308	None

¹Two plants tested per RIL/cultivar, i.e. #1 and #2.

²4B = *QYr.ufs-4B* (from Palmiet). 2A = *QYr.ufs-2A*, 2D = *QYr.ufs-2D*, 5B = *QYr.ufs-5B* and 6D = *QYr.ufs-6D* (from Yr16DH70).

³Markers GWM636, WMC245, GWM335 and GWM325 are closest to the respective QTLs.

Highlighted = Yr16DH70 marker allele detected.

N/A = no amplification.