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*(Triticum turgidum)*

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*(Triticum turgidum ssp. durum)*

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(Xgwm427 ) / (Xgwm274 ) / (PIC)

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(Kihara, 1944)

*(Triticum turgidum ssp. durum)*

(Marshall et al., 2001)

(Marshall et al., 2001)

(Arzani et al., 2005)

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(Arzani, 1998)

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DNA

(1998) Roder et al.

DNA

(2003) Maccaferri et al. (Theil et al., 2003)

DNA

(1984) Saghai-Marroof et al.

/  
Perry . / (DI)

(2004)

/ DNA  
/ 1mM dNTPs / 10X

/

/ Taq  
/

(2004) Kudryavtsev et al.

Touch Down

(2005) Medini et al. .

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- 1. Forward
  - 2. Reverse



$$PIC = 1 - \sum_{i=1}^n p_i^2$$

$$PI = \sum p_i^4 + \sum_{i=1}^n \sum_{j=i+1}^n (2P_i P_j)^2$$

D=1- (D) (PIC) (D) (PI) (PIC)

D PI PIC

کد	مکان ژنی	موتیف	کروموزوم	دمای اتصال	تعداد آلل	PIC	PI	D
1	Xgwm33	(GA)19	1A	60	13	0.692	0.020	0.980
2	Xgwm164	(CT)16	1A	55	5	0.755	0.030	0.970
3	Xgwm666	(CA)13	1A	60	8	0.151	0.244	0.756
4	Xgwm249	(GA)11(GGA)8	2A	55	4	0.633	0.076	0.924
5	Xgwm372	(GA)>51	2A	60	5	0.708	0.048	0.952
6	Xgwm155	(CT)19	3A	60	7	0.766	0.027	0.973
7	Xgwm674	(CT)16CCCC(GT)4	3A	60	6	0.681	0.065	0.935
8	Xgwm160	(GA)21	4A	60	5	0.460	0.189	0.811
9	Xgwm165	(GA)20	4A	60	2	0.183	0.643	0.357
10	Xgwm397	(CT)21	4A	55	11	0.150	0.101	0.899
11	Xgwm156	(GT)14	5A	60	4	0.160	0.477	0.523
12	Xgwm304	(CT)22	5A	55	6	0.586	0.072	0.928
13	Xgwm639	(GA)19	5A	55	6	0.709	0.026	0.974
14	Xgwm169	(GA)23	6A	60	6	0.730	0.035	0.965
15	Xgwm334	(GA)19	6A	50	9	0.451	0.046	0.954
16	Xgwm427	(CA)31(CA)22	6A	50	6	0.799	0.008	0.992
17	Xgwm459	(GA)>28	6A	55	7	0.788	0.015	0.985
18	Xgwm130	(GT)22	7A	60	4	0.655	0.055	0.945
19	Xgwm573	(CA)30	7A	50	10	0.141	0.130	0.870
20	Xgwm153	(GA)18	1B	60	7	0.142	0.191	0.809
21	Xgwm264	(CA)9A(CA)24	1B	60	3	0.524	0.137	0.863
22	Xgwm274	(GT)27	1B	50	6	0.007	0.328	0.672
23	Xgwm120	(CT)11(CA)18	2B	60	7	0.712	0.034	0.966
24	Xgwm148	(CA)22	2B	60	6	0.748	0.015	0.985
25	Xgwm526	(CT)16	2B	55	9	0.578	0.021	0.979
26	Xgwm340	(GA)26	3B	60	5	0.282	0.199	0.801
27	Xgwm389	(CT)14(GT)16	3B	60	6	0.789	0.012	0.988
28	Xgwm493	(CA)43	3B	60	7	0.794	0.009	0.991
29	Xgwm149	(GA)23	4B	55	7	0.420	0.246	0.754
30	Xgwm251	(CA)28	4B	55	4	0.431	0.195	0.805
31	Xgwm371	(CA)10(GA)32	5B	60	4	0.648	0.059	0.941
32	Xgwm443	(CA)20(GA)22	5B	55	17	0.513	0.030	0.970
33	Xgwm540	(CT)3(CC)(CT)16	5B	55	9	0.702	0.015	0.985
34	Xgwm132	(GA)24(GAA)6	6B	60	8	0.034	0.103	0.897
35	Xgwm133	(CT)39	6B	60	6	0.291	0.135	0.865
36	Xgwm508	(GT)19	6B	50	8	0.085	0.408	0.592
37	Xgwm146	(GA)5GG(GA)20	7B	60	9	0.612	0.032	0.968
		mean			6.9	0.500	0.120	0.879

... (*Triticum turgidum*)

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Xgwm165  
 Xgwm427 / D  
 D Xgwm493  
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 Xgwm33 Xgwm443 Xgwm493 Xgwm427 Xgwm443  
 Xgwm165  
 D PI PIC /

(Sghai-Marroof et al., 1984)

D PI , PIC

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(PCoA)  
 / / Xgwm493 Xgwm427  
 / / PIC Xgwm274  
 / PIC Xgwm493 Xgwm427

I, II

III

IV

PCoA

/ PIC

( / ) PIC

( )

PI

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- / PI Xgwm165

PI Xgwm493 Xgwm427

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Xgwm165

( ) (B A)

( / )

( ) D

( / )

Xgwm427

Xgwm493

D



... (*Triticum turgidum*)

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(2004) Mantovani et al.

NBS

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||B

(2002) Zhu et al.

(2004) Derisigacker et al.

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(2002) Ahmad et al. .

Informative

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/	1	AI	A
/	2		
/	1	AII	
/	2		
/	1	BIII	B
	2		
	1	BIV	
	2		

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