**Supplementary Table 4** Plant height statistics of different resistant locus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Locus | Chromosome | Allele | Varietynumber | Mean of Plant height | P-value |
| *D\_contig74317\_533* | 5D | + | 28 | 73.08 | 1.65E-04 |
| - | 177 | 73.57 |
| *Kukri\_c14239\_1995* | 1B | + | 11 | 73.80 | 9.70E-05 |
| - | 192 | 73.49 |
| *BS00025286\_51* | 7B | + | 52 | 75.00 | 2.84E-05 |
| - | 125 | 72.58 |
| *RAC875\_c35801\_905* | 3D | + | 19 | 71.57 | 3.72E-05 |
| - | 186 | 73.70 |
| *Kukri\_c4143\_1055* | 7B | + | 101 | 73.16 | 2.49E-04 |
| - | 104 | 73.83 |

**“+”** represents the allele for improving scab resistance; **“-”** represents the allele that reduces the resistance