**Supplementary Table 4. The *GhGATL* genes duplication types in *G. hirsutum*.**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene name | Gene | Gene type | Chromosome |
| GhGATL1\_At | Gh\_A01G0957 | 4 | A01 |
| GhGATL1\_Dt | Gh\_D01G1004 | 4 | D01 |
| GhGATL2\_Dt | Gh\_D02G0934 | 4 | D02 |
| GhGATL3\_At | Gh\_Sca005377G02 | 1 | - |
| GhGATL3\_Dt | Gh\_D03G1673 | 1 | D03 |
| GhGATL4\_Dt | Gh\_D05G1880 | 4 | A05 |
| GhGATL4\_At | Gh\_A05G1690 | 4 | D05 |
| GhGATL5\_Dt | Gh\_D05G2480 | 4 | A05 |
| GhGATL5\_At | Gh\_A05G2220 | 4 | D05 |
| GhGATL6\_Dt | Gh\_D06G0076 | 4 | A06 |
| GhGATL6\_At | Gh\_A06G0103 | 4 | D06 |
| GhGATL7\_Dt | Gh\_D11G1886 | 4 | A11 |
| GhGATL7\_At | Gh\_A11G1728 | 4 | D11 |
| GhGATL8\_Dt | Gh\_D12G0630 | 4 | A12 |
| GhGATL8\_At | Gh\_A12G0617 | 4 | D12 |
| GhGATL9\_At | Gh\_A05G0764 | 1 | A05 |
| GhGATL9\_Dt | Gh\_D05G0896 | 1 | D05 |
| GhGATL10\_Dt | Gh\_D10G1607 | 3 | A10 |
| GhGATL10\_At | Gh\_A10G0951 | 1 | D10 |
| GhGATL11\_Dt | Gh\_D11G1248 | 1 | A11 |
| GhGATL11\_At | Gh\_A11G1098 | 1 | D11 |
| GhGATL12\_At | Gh\_A07G1155 | 4 | A07 |
| GhGATL12\_Dt | Gohir.D07G131000.1.p | - | - |
| GhGATL13\_Dt | Gh\_D11G1174 | 4 | A11 |
| GhGATL13\_At | Gh\_A11G1018 | 4 | D11 |
| GhGATL14\_At | Gh\_A12G1168 | 4 | A12 |
| GhGATL14\_Dt | Gh\_D12G1288 | 4 | D12 |
| GhGATL15\_Dt | Gh\_D02G1704 | 4 | A03 |
| GhGATL15\_At | Gh\_A03G1265 | 4 | D02 |
| GhGATL16\_Dt | Gh\_D04G0487 | 1 | A05 |
| GhGATL16\_At | Gh\_A05G3147 | 1 | D04 |
| GhGATL17\_At | Gh\_A05G2796 | 4 | A05 |
| GhGATL17\_Dt | Gh\_D05G3101 | 4 | D05 |

0, 1, 2, 3, 4 stand for singleton, dispersed, proximal, tandem, segmental.