

1 **Examples of the genotypes of Glyma.01G165800 knocked out hairy roots and their phenotypes**

2

3 1.

4 Wildtype (Nod-): ATGGGAAATTCAACTAAAA:TGGCATCCATCGTGACTATGG

5 Transgenic (Nod-, heterogeneous mutant alleles):

6 Allele 1: ATGGGAAATTCAACTA:::TGGCATCCATCGTGACTATGG

7 Allele 2: ATGGGAAATTCAACTAAA:TGGCATCCATCGTGACTATGG

8 Allele 3: ATGGGAAATTCAACTAAAAATGGCATCCATCGTGACTATGG

9 2.

10 Wildtype (Nod-): ATGGGAAATTCAACTAAAAATGGCATCCATCGTGACTATGG

11 Transgenic (Nod-, heterogeneous mutant alleles):

12 Allele 1: ATGGGAAATTCAACTAAA:TGGCATCCATCGTGACTATGG

13 Allele 2: ATGGGAAATTCAA:::AATGGCATCCATCGTGACTATGG

14 3.

15 Wildtype (Nod-): ATGGGAAATTCAACTAAAAATGGCATCCATCGTGACTATGG

16 Transgenic (Nod-): ATGGGAAATTCAACTAAA:TGGCATCCATCGTGACTATGG

17 4.

18 Wildtype (Nod-): ATGGGAAATTCAACTAAAAATGGCATCCATCGTGACTATGG

19 Transgenic (Nod-, heterogeneous mutant alleles):

20 Allele 1: ATGGGAAATTCAAC:AAAATGGCATCCATCGTGACTATGG

21 Allele 2: ATGGGAAATTCAACTAAA:TGGCATCCATCGTGACTATGG

22 Allele 3: ATGGGAAATTCAAC:::ATGGCATCCATCGTGACTATGG

23 5.

24 Wildtype (Nod-): ATGGGAAATTCAACTAAAAATGGCATCCATCGTGACTATGG

25 Transgenic (Nod-, heterogeneous mutant alleles):

26 Allele 1: ATGGGAAATTCAACTAAA:TGGCATCCATCGTGACTATGG

27 Allele 2: ATGGGAAATTCAA:::AAATGGCATCCATCGTGACTATGG

28 6.

29 Wildtype (Nod-): GCAACAACCTTGTAATGTCCGTATGGGAAATTCAACTAAAAATGGCATCCATCGTGACTATGGCAAGTC

30 Transgenic (Nod-, heterogeneous mutant alleles):

31 Allele 1: GCAACAACCTTGTAATGTCCGTATGGGAAATTCAACTAAA:TGGCATCCATCGTGACTATGGCAAGTC

32 Allele 2: GCAA::GTC

33

34

35 7.  
36 Wildtype (Nod-): ATAGAATGGCATTTCATCGTGACTATGGCAACAACCTTGTAAATGTCCGTATGGGAAATTCAACTAAAATGGCATC  
37 Transgenic (Nod-, heterogeneous mutant alleles):  
38 Allele 1: ATAG:::AATGGCATC  
39 Allele 2: ATAGAATGGCATTTCATCGTGACTATGGCAACAACCTTGTAAATGTCCGTATGGGAAATTCAACTAAA:TGGCATC  
40 Allele 3: ATAGAATGGCATTTCATCGTGACTATGGCAACAACCTTGTAAATGTCCGTATGGGAAATTCAACT:::TGGCATC  
41 8.  
42 Wildtype (Nod-): ATGGGAAATTCAACTAAAATGGCATCCATCGTGACTATGG  
43 Transgenic (Nod-, heterogeneous mutant alleles):  
44 Allele 1: ATGGGAAATTCAACTA:::TGGCATCCATCGTGACTATGG  
45 Allele 2: ATGGGAAATTCAA:::AATGGCATCCATCGTGACTATGG  
46 9.  
47 Wildtype (Nod-): ATGGGAAATTCAACTAAAATGGCATCCATCGTGACTATGG  
48 Transgenic (Nod-, heterogeneous mutant alleles):  
49 Allele 1: ATGGGAAATTCAAC:::AATGGCATCCATCGTGACTATGG  
50 Allele 2: ATGGGAAATTCAA:::AAAATGGCATCCATCGTGACTATGG  
51  
52

53 **Examples of the genotypes of Glyma.01G165800-D knocked out hairy roots and their phenotypes**

54

55 1.

56 Wildtype (Nod-): ATGGCAAGTTCGACTAAAA:AGGCATTCATCATCACTACGG

57 Transgenic (Nod+): ATGGCAAGTTCGACTAAAAAAGGCATTCATCATCACTACGG

58 2.

59 Wildtype (Nod-): ATGGCAAGTTCGACTAAAA:AGGCATTCATCATCACTACGG

60 Transgenic (Nod+, heterogeneous mutant alleles):

61 Allele 1: ATGGCAAGTTCGACTA:::CGGCATTCATCATCACTACGG

62 Allele 2: ATGGCAAGTTCGACTAAAAAAGGCATTCATCATCACTACGG

63 3.

64 Wildtype (Nod-): ATGGCAAGTTCGACTAAAAAGGCATTCATCATCACTACGG

65 Transgenic (Nod+): ATGGCAAGTTCGACTAAAA:GGCATTCATCATCACTACGG

66 4.

67 Wildtype (Nod-): ATGGCAAGTTCGACTA:AAA:AGGCATTCATCATCACTACGG

68 Transgenic (Nod+, heterogeneous mutant alleles):

69 Allele 1: ATGGCAAGTTCGACTATAAAAAGGCATTCATCATCACTACGG

70 Allele 2: ATGGCAAGTTCGACTA:AAAAAGGCATTCATCATCACTACGG

71 5.

72 Wildtype (Nod-): ATGGCAAGTTCGACTAAAAAGGCATTCATCATCACTACGG

73 Transgenic (Nod+, heterogeneous mutant alleles):

74 Allele 1: ATGGCAAGTTCGACTAA::AGGCATTCATCATCACTACGG

75 Allele 2: ATGGCAAGTTCGAC:AAAAAGGCATTCATCATCACTACGG

76 6.

77 Wildtype (Nod-): ATGGCAAGTTCGACTAAAAAGGCATTCATCATCACTACGG

78 Transgenic (Nod+, heterogeneous mutant alleles):

79 Allele 1: ATGGCAAGTTCGAC:AAC::GGCATTCATCATCACTACGG

80 Allele 2: ATGGCAAGTTCGACTAAA:AGGCATTCATCATCACTACGG

81 7.

82 Wildtype (Nod-): ATGGCAAGTTCGACTA:.....AAAAGGCATT

83 Transgenic (Nod+): ATGGCAAGTTCGACTATCTCTGTGACCGCTCACAACATTACTGGAGGAAAAAAGGCATT

84

85

86 8.

87 Wildtype (Nod-): ATGGCAAGTTCGACTAAAAAGGCATTCATCATCACTACGG  
88 Transgenic (Nod+): ATGGCAAGTTCGACTAAAA:GGCATTTCATCATCACTACGG  
89  
90 9.  
91 Wildtype (Nod-): ATGGCAAGTTCGACTAAAA:AGGCATTCATCATCACTACGG  
92 Transgenic (Nod+, heterogeneous mutant alleles):  
93 Allele 1: ATGGCAAGTTCGACTAAAAAAGGCATTCATCATCACTACGG  
94 Allele 2: ATGGCAAGTTCGACTAAA::AGGCATTCATCATCACTACGG  
95