

Table 5. Survival and growth of plants after hypoxic stress is proportional to the level of GLB1 overexpression

	Exp. 1-7	Exp. 8 and 9	Exp. 10 and 11	LOP	Slope	r ²
Shoot survival, %						
WT (C24)	16 ⁽²⁷⁵⁾ †††	33 ⁽¹³⁵⁾ †††	58 ⁽⁵⁵⁾	100 ⁽¹³⁾	0.99	0.88
Promoter::GUS controls*	1 ⁽¹⁵⁵⁾ †††	0 ⁽²⁷⁾ †††	69 ⁽³⁹⁾	100 ⁽⁹⁾	1.31	0.89
35S::GLB1 (D4)	76 ⁽³²¹⁾ †††††	80 ⁽¹⁸⁶⁾ †††††	87 ⁽³⁰⁾ ††	90 ⁽¹⁰⁾	0.2††††	0.04
35S::GLB1 (D1)*	26 ⁽¹³²⁾ ††††	56 ⁽⁸¹⁾ ††††	NA	NA	1.31	0.33
35S::GLB1 (D11)*	15 ⁽²⁰⁹⁾ †††	38 ⁽⁹⁰⁾ †††	NA	NA	1.15	0.49
35S::GLB1S	26 ⁽¹⁵⁶⁾ ††††	67 ⁽⁷⁶⁾ †††††	82 ⁽¹²⁰⁾ †††	100 ⁽²⁷⁾	1.05	0.64
Shoot weight, mg/10 plants						
WT (C24)	156 ⁽¹³⁾	191 ⁽⁶⁾	529 ⁽⁴⁾	695 ⁽¹⁾	0.70‡	0.64
Promoter::GUS controls*	100 ⁽⁷⁾	149 ⁽²⁾	696 ⁽⁴⁾	969 ⁽¹⁾	1.17†	0.88
35S::GLB1 (D4)	596 ⁽¹¹⁾ †††††	572 ⁽⁴⁾ ††††	614 ⁽³⁾	660 ⁽¹⁾	0.07††††	0.03
35S::GLB1 (D1)*	363 ⁽⁵⁾ ‡	464 ⁽²⁾ ††‡	NA	NA	0.25	0.02
35S::GLB1 (D11)*	201 ⁽⁷⁾ ‡	373 ⁽¹⁾	NA	NA	0.72	0.32

<i>35S::GLB1S</i>	265 ⁽¹⁰⁾ †††	691 ⁽³⁾ †††	593 ⁽⁸⁾	646 ⁽²⁾	0.51	0.46
Root weight, mg/10 plants						
WT (C24)	8 ⁽¹³⁾	10 ⁽⁶⁾	54 ⁽⁴⁾	133 ⁽¹⁾	0.12	0.82
Promoter::GUS controls*	7 ⁽⁷⁾	10 ⁽²⁾	56 ⁽⁴⁾	152 ⁽¹⁾	0.15	0.89
<i>35S::GLB1</i> (D4)	50 ⁽¹¹⁾ †††††	75 ⁽⁴⁾ ††††	114 ⁽³⁾ †††	144 ⁽¹⁾	0.13	0.71
<i>35S::GLB1</i> (D1)*	15 ⁽⁵⁾	18 ⁽²⁾ †††	NA	NA	-0.01††	0.01
<i>35S::GLB1</i> (D11)*	8 ⁽⁷⁾	13 ⁽¹⁾	NA	NA	0.02††††	0.14
<i>35S::GLB1S</i>	13 ⁽¹⁰⁾	47 ⁽³⁾ †††††	83 ⁽⁹⁾	103 ⁽²⁾	0.12	0.81

Experiments are grouped according to the severity of the hypoxia treatment measured by survival of C24. The slope and r^2 calculations used the entire dataset for each strain (up to 11 experiments in total). Overexpression of the *P. andersonii* symbiotic GLB1 (GLB1S) can also reduce the effects of hypoxia. Numbers in parentheses to the right of the large font numbers indicate the sample size. Symbols to the right of each entry represent statistical differences between results and WT C24 plants (†) or GUS kanamycinresistant control lines (‡). The number of symbols represents the *P* value from a z-test (survival), Student's *t* test (weights) or Alexander's test (slopes): 1 symbol indicates $0.01 < P < 0.05$, 2 indicates $0.001 < P < 0.01$, and 3 indicates $P < 0.001$. *35S::GLB1* lines D1 and D11 were not included in experiments 10 and 11 or the low oxygen pretreatment experiment (LOP).

*Some data are from a mixture of homozygotes and heterozygotes selected on kanamycin.