

Table 1. Background on wild-type (WT) and mutant *Arabidopsis thaliana* plants

Three ecotypes [Columbia (Col), Landsberg *erecta* (*Ler*), and Wassilewskija (Ws)] were used in this study. The information on chloroplast numbers, sizes, and the affected genes was obtained from Aldridge *et al.* (2005), TAIR (www.arabidopsis.org), and the references cited. nd = not determined.

Plant	Ecotype	Chloroplast number/cell	Chloroplast size (μm^2)	Gene locus	Role of gene product	References
WT	Col	100	50			
<i>phot1</i>	Col	nd	nd	At3g45780	Blue-light receptor that mediates chloroplast movement (accumulation)	Christie, 2007
<i>phot2</i>	Col	nd	nd	At5g58140	Blue-light receptor that mediates chloroplast movement (accumulation and avoidance)	Christie, 2007
<i>phot1/phot2</i>	Col	nd	nd		See information above	Christie, 2007
<i>arc6-4</i>	Col	2	1000	At5g42480	DnaJ-like protein localized to the plastid division site; contributes to assembly, stabilization of the Z-ring	Isolated by authors
WT	<i>Ler</i>	120	50			
<i>arc1-1</i>	<i>Ler</i>	108	25	nd	Accelerates proplastid division; acts independent of arc 3, 5, 6, and 11	Marrison <i>et al.</i> , 1999
<i>arc11-1 = MinD</i>	<i>Ler</i>	30	110	At5g24020	Stromal, Ca ²⁺ -dependent ATPase required for correct positioning of chloroplast division apparatus	Fujiwara <i>et al.</i> , 2004
<i>arc3-1</i>	<i>Ler</i>	18	200–300	At1g75010	Stromal protein with FtsZ-like part and kinase; involved in division site placement	Maple <i>et al.</i> , 2007
<i>arc5-1</i>	<i>Ler</i>	13	300–900	At3g19720	Cytosolic dynamin-related protein; facilitates separation of daughter chloroplasts	Gao <i>et al.</i> , 2003
<i>arc5-1/11-1</i>	<i>Ler</i>	12	160		See above	Marrison <i>et al.</i> , 1999
<i>arc6-1/1-1</i>	<i>Ler</i>	9	530		See above	Marrison <i>et al.</i> , 1999
<i>arc6-1</i>	<i>Ler</i>	2	1000		See above	Vitha <i>et al.</i> , 2003
WT	Ws	85	50			
<i>arc7-1</i>	Ws	80	40	nd	Involved in chloroplast development rather than division itself	Rutherford, 1996
<i>arc8-1</i>	Ws	45	110	nd	nd	Rutherford, 1996
<i>arc10-1</i>	Ws	38	170 (mix)	nd	nd	Rutherford, 1996
<i>arc9-1</i>	Ws	34	140	nd	nd	Rutherford, 1996
<i>arc6-1</i>	Ws	2	1000		See above	Vitha <i>et al.</i> , 2003