

Figure S1

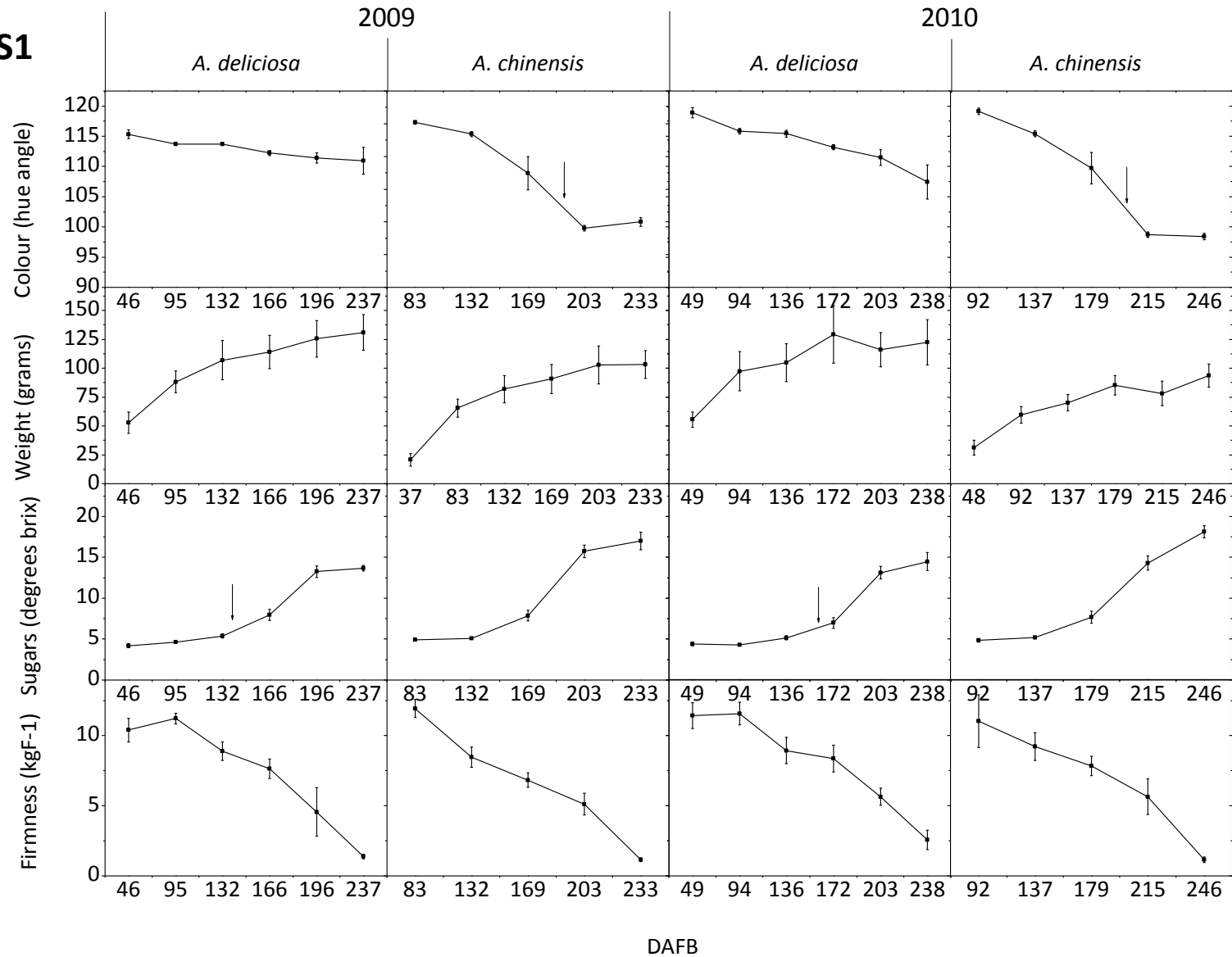


Figure S1. Colour, soluble sugars, weight and firmness of *A. chinensis* and *A. deliciosa* fruit over development in 2009 and 2010. Colour is measured as hue angle, where a hue angle below 100° is yellow, a hue between 100° and 110° is green/yellow, and a hue above 110° is green. Soluble sugars are measured in °Brix, weight is measured in grams, and firmness is measured in kgF. Measurements are given for *A. deliciosa* (left panels) and *A. chinensis* (right panels) over fruit development (DAFB) in 2009 (right) and 2010 (left). Arrows indicate commercial harvest points as determined by maturity standards for soluble sugar levels in *A. deliciosa* and colour measurements in *A. chinensis*. Error bars indicate standard deviation (n=10).

Figure S2

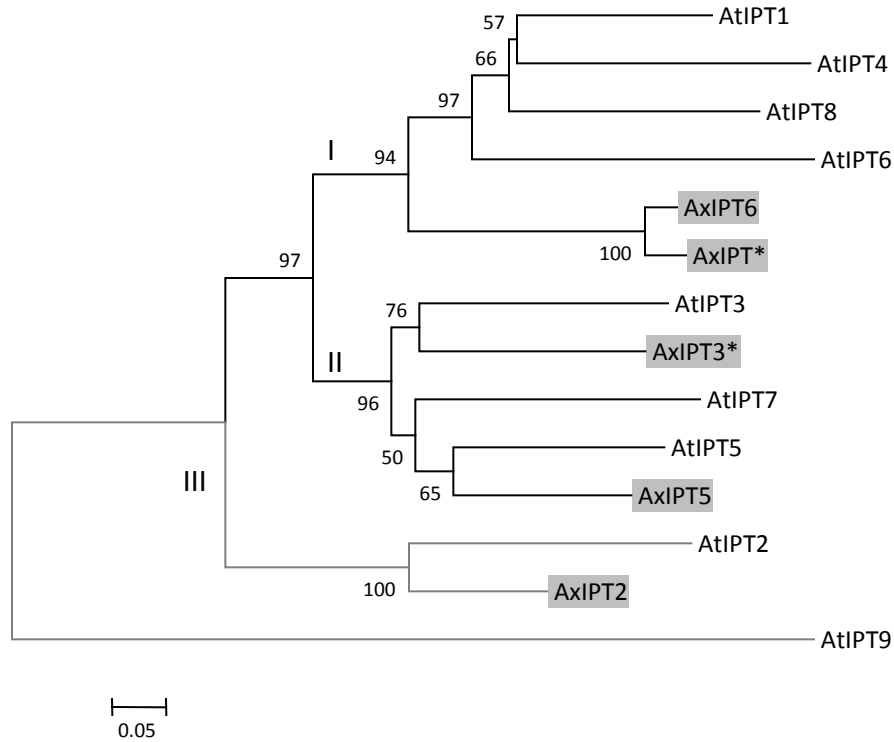


Figure S2. Phylogenetic tree of IPT. The unrooted phylogenetic tree of full length protein sequences from *Arabidopsis* and *A. chinensis* aligned using Clustal W. Branch support values from 100 bootstraps are indicated when higher than 50%. Grey boxes indicate *Actinidia* IPT proteins. Grey branches indicate IPTs involved in *cis*-zeatin synthesis.

Figure S3

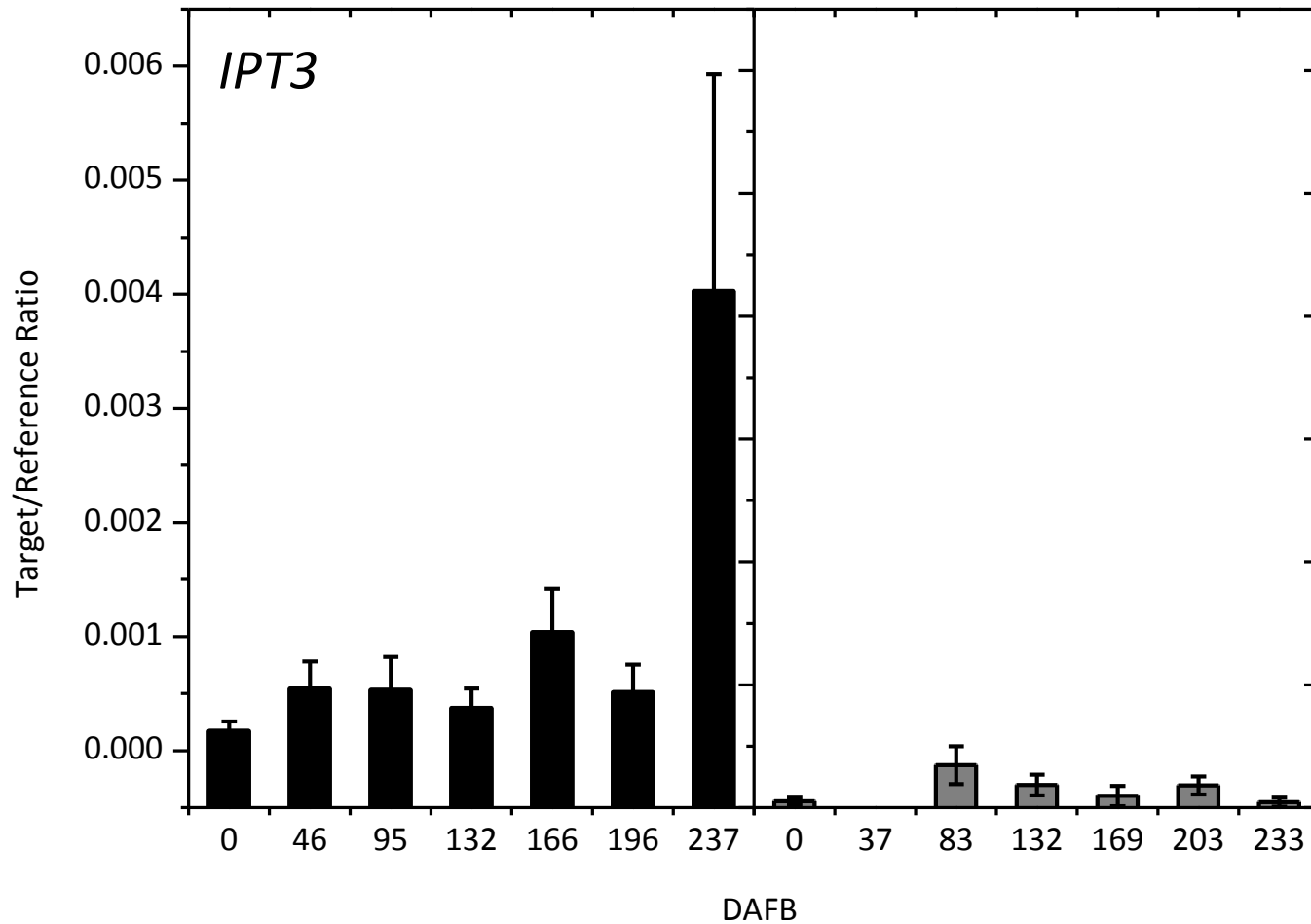


Figure S3. Expression of cytokinin biosynthetic gene *IPT3* in *A. chinensis* and *A. deliciosa* fruit over development in 2009. Expression of cytokinin biosynthetic pathway genes in *Actinidia deliciosa* (left panels, black bars) and *A. chinensis* (right panels, grey bars) over fruit development (days after full bloom; DAFB), measured as a target/reference ratio. Error bars indicate standard error (n=4).

Table S1. Concentration of minor cytokinin metabolites in *A. deliciosa* and *A. chinensis* in 2009 and 2010 in pmol/g DW (\pm SE), (n=3).

	DAFB	Free Bases			Ribosides			Nucleotides		Methiols				Glucosides				
		DZ	cisZ	iP	DZR	cisZR	iPR	DZNT	cisZNT	MeSZ	MeSiP	MeSZR	MeSiPA	DZOG	cisZROG	DZ9G	tZOG	tZ9G
<i>A. chinensis</i> 2009	37	0.00	0.00	2.86 (\pm 0.56)	3.30 (\pm 0.36)	1.71 (\pm 0.34)	10.24 (\pm 0.50)	10.28 (\pm 0.73)	6.67 (\pm 0.89)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.67 (\pm 0.42)	20.49 (\pm 4.73)
	83	N/D	0.00	2.57 (\pm 1.15)	1.57 (\pm 0.76)	1.09 (\pm 0.48)	14.24 (\pm 4.68)	9.32 (\pm 3.73)	8.11 (\pm 2.88)	0.00	0.00	0.00	0.00	0.00	3.89 (\pm 0.84)	0.00	0.93 (\pm 0.39)	19.58 (\pm 6.21)
	132	N/D	0.00	3.32 (\pm 0.35)	3.44 (\pm 0.28)	2.58 (\pm 0.23)	188.09 (\pm 6.33)	15.49 (\pm 0.70)	N/D	0.00	0.00	0.00	0.00	0.00	0.20 (\pm 0.15)	0.00	3.44 (\pm 0.18)	14.05 (\pm 0.99)
	169	N/D	0.00	4.34 (\pm 0.49)	7.95 (\pm 0.85)	2.61 (\pm 0.17)	167.30 (\pm 20.83)	97.34 (\pm 12.05)	N/D	0.00	0.00	0.00	0.00	1.67 (\pm 0.06)	0.00	0.00	7.90 (\pm 0.39)	26.26 (\pm 1.24)
	203	2.55 (\pm 0.94)	0.00	3.09 (\pm 0.27)	7.65 (\pm 0.94)	0.90 (\pm 0.38)	6.27 (\pm 0.13)	417.46 (\pm 34.13)	N/D	0.00	0.00	0.00	0.00	4.66 (\pm 0.23)	0.00	0.00	16.83 (\pm 0.51)	53.89 (\pm 1.32)
	233	18.99 (\pm 0.80)	0.00	2.36 (\pm 1.19)	55.67 (\pm 1.34)	3.23 (\pm 0.48)	23.20 (\pm 0.33)	748.67 (\pm 23.43)	N/D	0.00	0.00	0.00	0.00	26.34 (\pm 1.84)	0.00	0.00	63.24 (\pm 3.62)	148.47 (\pm 5.78)
<i>A. deliciosa</i> 2009	46	3.66 (\pm 0.93)	0.00	0.57 (\pm 0.08)	N/D	0.87 (\pm 0.37)	5.44 (\pm 0.43)	2.19 (\pm 0.34)	6.12 (\pm 0.18)	0.00	0.00	0.00	0.00	0.00	26.82 (\pm 2.86)	0.00	2.06 (\pm 0.30)	10.10 (\pm 1.05)
	95	0.00	0.00	0.56 (\pm 0.18)	N/D	1.07 (\pm 0.20)	11.11 (\pm 7.96)	5.72 (\pm 2.46)	13.04 (\pm 0.39)	0.00	0.00	0.00	0.00	0.00	1.34 (\pm 0.95)	0.00	2.46 (\pm 0.34)	4.88 (\pm 0.29)
	132	2.95 (\pm 0.58)	0.00	1.39 (\pm 0.14)	3.00 (\pm 0.28)	2.57 (\pm 0.15)	30.95 (\pm 1.66)	33.57 (\pm 0.76)	N/D	0.00	0.00	0.00	0.00	0.00	1.00 (\pm 1.41)	0.00	12.56 (\pm 1.74)	9.74 (\pm 0.80)
	166	3.83 (\pm 1.12)	0.00	1.23 (\pm 0.20)	8.24 (\pm 0.39)	2.30 (\pm 0.43)	11.89 (\pm 1.23)	60.91 (\pm 3.18)	N/D	0.00	0.00	0.00	0.00	1.04 (\pm 0.23)	0.00	0.00	43.18 (\pm 2.19)	10.39 (\pm 0.96)
	196	3.95 (\pm 1.58)	0.00	2.40 (\pm 0.26)	33.61 (\pm 2.29)	7.26 (\pm 0.78)	23.01 (\pm 1.59)	204.89 (\pm 22.99)	N/D	0.00	0.00	0.00	0.00	2.34 (\pm 0.68)	0.00	0.00	77.35 (\pm 7.50)	14.35 (\pm 1.82)
	237	5.36 (\pm 0.58)	0.00	3.32 (\pm 0.16)	74.08 (\pm 1.54)	7.77 (\pm 1.39)	36.35 (\pm 1.65)	590.26 (\pm 15.42)	N/D	0.00	0.00	0.00	0.00	12.66 (\pm 2.24)	0.00	0.00	128.45 (\pm 1.47)	28.29 (\pm 0.27)
<i>A. chinensis</i> 2010	48	2.40 (\pm 0.00)	0.00	N/D	3.58 (\pm 0.38)	2.34 (\pm 0.22)	12.80 (\pm 0.75)	10.35 (\pm 0.33)	9.58 (\pm 0.00)	0.00	0.00	0.00	0.00	0.00	0.31 (\pm 0.13)	0.00	0.00	12.57 (\pm 1.29)
	92	N/D	0.00	1.10 (\pm 0.00)	3.23 (\pm 1.23)	18.48 (\pm 23.18)	57.45 (\pm 48.16)	5.88 (\pm 1.13)	39.70 (\pm 34.59)	0.00	0.00	0.00	0.00	0.00	11.54 (\pm 0.27)	0.00	2.35 (\pm 0.57)	8.30 (\pm 0.29)
	137	0.00	0.00	1.05 (\pm 0.04)	0.85 (\pm 0.20)	0.76 (\pm 0.30)	20.28 (\pm 4.74)	17.50 (\pm 1.67)	N/D	0.00	0.00	0.00	0.00	0.77 (\pm 0.18)	0.18 (\pm 0.16)	0.00	3.97 (\pm 0.44)	11.24 (\pm 0.92)
	179	0.00	0.00	1.32 (\pm 0.19)	3.95 (\pm 0.78)	1.65 (\pm 0.15)	40.33 (\pm 12.21)	170.63 (\pm 15.67)	N/D	0.00	0.00	0.00	0.00	1.42 (\pm 0.18)	0.12 (\pm 0.17)	0.00	6.35 (\pm 0.52)	24.98 (\pm 0.24)
	215	N/D	0.00	1.58 (\pm 0.11)	9.29 (\pm 0.37)	0.97 (\pm 0.64)	25.41 (\pm 0.51)	412.11 (\pm 9.46)	N/D	0.00	0.00	0.00	0.00	3.18 (\pm 0.50)	0.00	0.00	9.84 (\pm 0.67)	49.02 (\pm 1.79)
	246	18.11 (\pm 2.46)	0.00	0.68 (\pm 0.25)	67.67 (\pm 6.07)	3.20 (\pm 0.29)	21.58 (\pm 2.56)	1014.89 (\pm 102.06)	N/D	0.00	0.00	0.00	0.00	32.81 (\pm 4.20)	0.00	0.00	38.13 (\pm 0.78)	84.14 (\pm 2.64)
<i>A. deliciosa</i> 2010	49	0.00	0.00	0.34 (\pm 0.07)	1.65 (\pm 0.30)	1.23 (\pm 0.06)	9.51 (\pm 0.92)	8.93 (\pm 1.58)	9.51 (\pm 1.49)	0.00	0.00	0.00	0.00	0.44 (\pm 0.31)	8.20 (\pm 0.48)	0.00	3.35 (\pm 0.31)	11.08 (\pm 0.72)
	94	0.00	0.00	0.34 (\pm 0.08)	0.54 (\pm 0.10)	1.80 (\pm 0.36)	7.95 (\pm 3.26)	2.79 (\pm 0.08)	19.17 (\pm 2.08)	0.00	0.00	0.00	0.00	0.34 (\pm 0.24)	0.84 (\pm 1.19)	0.00	3.61 (\pm 0.44)	5.05 (\pm 0.76)
	136	0.00	0.00	1.23 (\pm 0.10)	1.46 (\pm 0.19)	1.40 (\pm 0.27)	21.24 (\pm 0.40)	16.94 (\pm 2.94)	N/D	0.00	0.00	0.00	0.00	0.24 (\pm 0.34)	0.00	0.00	12.88 (\pm 0.50)	4.80 (\pm 0.37)
	172	0.00	0.00	1.60 (\pm 0.23)	8.36 (\pm 3.33)	11.10 (\pm 3.58)	40.36 (\pm 16.30)	87.65 (\pm 35.24)	N/D	0.00	0.00	0.00	0.00	0.92 (\pm 0.14)	0.00	0.00	39.21 (\pm 1.98)	8.62 (\pm 0.04)
	203	8.28 (\pm 2.31)	0.00	1.26 (\pm 0.30)	38.88 (\pm 13.36)	6.33 (\pm 1.28)	14.66 (\pm 5.10)	325.75 (\pm 124.72)	N/D	0.00	0.00	0.00	0.00	5.36 (\pm 0.50)	0.00	0.00	59.41 (\pm 0.82)	15.36 (\pm 0.29)
	233	8.37 (\pm 0.42)	0.00	2.24 (\pm 0.14)	61.34 (\pm 2.46)	4.80 (\pm 1.17)	16.74 (\pm 0.86)	832.20 (\pm 15.22)	53.34 (\pm 0.00)	0.00	0.00	0.00	0.00	26.16 (\pm 0.74)	0.00	0.00	134.81 (\pm 8.59)	14.97 (\pm 1.15)