Table S2. Carotenoid composition in *X. dendrorhous* wild-type and mutant strains cultured in MMv with 2% glucose.

Strain	Carotenoid	Growth curve phase				
		S1	**S2**	**S3**	**S4**	**S5**
Wild-type	Astaxanthin	79,2±9,4	76,1±7,6	67,9,2±3,6	69,7±8,0	71,0±2,1
	Beta-carotene	11,2±6,0	3,9±2,0	7,6±2,6	3,4±1,3	6,4±3,1
	Early intermediaries	ND	2,7±0,6	10,9±0,8	8,7±1,0	8,1±0,5
	Late intermediaries	10,4±0,7	16,1±2,7	16,7±2,8	15,4±1,4	16,1±1,3
385*tup1*$^-$	Astaxanthin	95,4±1,8 *	86,7±1,8 *	80,9±0,4 *	82,1±5,9 *	79,8±4,0 *
	Beta-carotene	ND	4,5±0,3	6,3±1,0	4,0±0,8	6,4±1,9
	Early intermediaries	4,6±1,8 **	ND *	5,7±1,2 **	6,9±1,2	6,6±0,6
	Late intermediaries	ND **	8,8±1,6 *	7,1±0,6 *	5,0±1,6 **	7,1±2,1 **
385*cyc8*$^-$	Astaxanthin	68±3,5	71,2±8	74,7±2,2	83,5±2,5*	86,5±3,2*
	Beta-carotene	11,4±1,7	8,27±1,2*	13±2,5*	6,6±0,6*	4,8±0,5
	Early intermediaries	14,8±4,1**	8,5±1**	9±0,2*	8,1±1,4	6,4±2,3
	Late intermediaries	4,4±1,2*	2,2±0,6**	3,5±1,5*	1,7±0,5**	2,3±0,4**

Early intermediaries: monocyclic carotenoids preceding beta-carotene in the synthesis pathway. Late intermediaries: carotenoids produced in the steps leading to astaxanthin from beta-carotene. Values are the percentage of each compound respect to the total carotenoid content and correspond to the average of three independent cultures and errors to the standard deviation. *: $p < 0,05$; **: $p < 0,01$, Student's t-test (Each mutant strain compared with respect to the wild-type strain). ND: not detected.