

Table S3. Production of cytokinins in minimal medium by derivatives of *Pseudomonas syringae* pv. savastanoi NCPPB 3335 cured of different native plasmids or mutated in genes *ptz* and *idi*, and complemented strains

	Amount of cytokinins in culture filtrates (nM) per strain ^a									
	WT ^b	ΔAB	ΔC	ΔABC	Δ <i>ptz</i>		Δ <i>idi</i> [−]		Δ <i>ptz</i> [−] <i>idi</i> [−]	
					-	+ <i>ptz</i>	-	+ <i>idi</i>	-	+ <i>ptz</i> + <i>idi</i>
Precursors										
iPRMP ^c	0.2 ± 0.0	0.2 ± 0.0	0.2 ± 0.0	0.2 ± 0.0	0.1 ± 0.0	0.4 ± 0.0	0.2 ± 0.0	0.2 ± 0.0	0.1 ± 0.0	0.2 ± 0.0
tZRMP	7.7 ± 0.8	≤ 0.05	3.8 ± 0.5	≤ 0.05	≤ 0.05	38.6 ± 4.6	9.5 ± 0.8	9.2 ± 1.0	≤ 0.05	7.3 ± 0.4
DHZMP	≤ 0.05	<LOD	≤ 0.05	<LOD	<LOD	≤ 0.05	≤ 0.05	≤ 0.05	<LOD	≤ 0.05
Σ (%)	8.0 ± 0.8	0.2 ± 0.0	4.0 ± 0.5	0.2 ± 0.0	0.2 ± 0.0	39.1 ± 4.6	9.7 ± 0.8	9.4 ± 1.0	0.2 ± 0.0	7.6 ± 0.4
Transporters										
iPR	0.1 ± 0.0	≤ 0.05	0.1 ± 0.0	0.1 ± 0.0	≤ 0.05	0.2 ± 0.0	0.1 ± 0.0	0.4 ± 0.1	≤ 0.05	0.1 ± 0.0
tZR	9.9 ± 1.0	≤ 0.05	14.4 ± 3.2	≤ 0.05	≤ 0.05	79.0 ± 6.9	12.8 ± 1.0	29.0 ± 3.0	≤ 0.05	13.1 ± 1.4
DHZR	0.3 ± 0.0	≤ 0.05	0.6 ± 0.2	≤ 0.05	≤ 0.05	2.0 ± 0.3	0.4 ± 0.0	0.8 ± 0.1	≤ 0.05	0.3 ± 0.0
Σ (%)	10.2 ± 1.0	≤ 0.05	15.1 ± 3.4	0.1 ± 0.0	≤ 0.05	81.2 ± 7.2	13.2 ± 1.0	30.1 ± 3.1	≤ 0.05	13.6 ± 1.4
Active forms										
iP	3.4 ± 0.5	1.2 ± 0.2	5.6 ± 0.3	1.7 ± 0.2	0.9 ± 0.1	10.0 ± 1.7	3.9 ± 0.4	3.6 ± 0.4	1.6 ± 0.3	3.1 ± 0.4
tZ	66.1 ± 5.5	≤ 0.05	107.3 ± 8.3	≤ 0.05	≤ 0.05	253.9 ± 13.7	101.7 ± 8.0	101.4 ± 8.3	0.1 ± 0.0	80.6 ± 5.1
DHZ	4.9 ± 0.5	≤ 0.05	10.2 ± 1.2	≤ 0.05	≤ 0.05	42.1 ± 5.8	8.2 ± 0.9	7.3 ± 1.0	≤ 0.05	4.8 ± 0.4
Σ (%)	74.5 ± 6.4	1.3 ± 0.2	123.0 ± 9.8	1.8 ± 0.2	0.9 ± 0.1	306.0 ± 21.2	113.8 ± 9.4	112.3 ± 9.7	1.7 ± 0.3	88.5 ± 5.9

Glycosilated (inactive forms)

tZ9G	0.3 ± 0.0	-	0.4 ± 0.0	≤ 0.05	≤ 0.05	1.3 ± 0.2	0.4 ± 0.0	0.4 ± 0.0	≤ 0.05	0.3 ± 0.0
DHZ9G	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	0.2 ± 0.0	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05
tZOG	0.1 ± 0.0	<LOD	0.1 ± 0.0	<LOD	<LOD	0.3 ± 0.1	≤ 0.05	0.1 ± 0.0	<LOD	≤ 0.05
DHZOG	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05	≤ 0.05
Σ (%)	0.4 ± 0.0	≤ 0.05	0.6 ± 0.1	≤ 0.05	≤ 0.05	1.8 ± 0.3	0.4 ± 0.0	0.5 ± 0.0	≤ 0.05	0.4 ± 0.0

Total

Σ (%)	93.0 ± 8.3	1.5 ± 0.2	142.6 ± 13.7	2.0 ± 0.3	1.1 ± 1.1	428.0 ± 33.3	137.2 ± 11.2	152.3 ± 13.8	1.9 ± 0.3	110.1 ± 7.8
cZRMP	0.2 ± 0.0	0.2 ± 0.0	0.1 ± 0.0	0.2 ± 0.0	0.1 ± 0.0	0.3 ± 0.0	0.1 ± 0.0	0.1 ± 0.0	0.1 ± 0.0	0.1 ± 0.0
cZR	0.1 ± 0.0	≤ 0.05	0.1 ± 0.0	0.1 ± 0.0	≤ 0.05	0.2 ± 0.0	≤ 0.05	0.1 ± 0.0	≤ 0.05	0.1 ± 0.0
cZ	0.1 ± 0.0	0.1 ± 0.0	0.2 ± 0.0	0.1 ± 0.0	0.1 ± 0.0	0.4 ± 0.0	0.2 ± 0.0	0.1 ± 0.0	0.1 ± 0.0	0.1 ± 0.0
cZOG	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Σ (%)	0.4 ± 0.0	0.4 ± 0.0	0.4 ± 0.0	0.3 ± 0.0	0.2 ± 0.0	0.9 ± 0.0	0.3 ± 0.0	0.3 ± 0.0	0.3 ± 0.0	0.2 ± 0.0

^a Figures represent the average of four biological replicates with two technical replicates each (N=8) in fmol/μL ± SE rounded to one decimal. Total is the sum of precursors, glycosylated (inactive) and active forms.

^b All strains derive from the wild type strain NCPPB 3335 (WT) and are summarized in Table S1. Names indicate the plasmids or genes that are missing in each strain; +*ptz* and +*idi* denote complementation with a cloned wild type copy of genes *ptz* and/or *idi*.

^c Abbreviations: *cis*- and *trans*-zeatin (cZ and tZ), dihydrozeatin (DHZ), and isopentenyl adenine (iP), with the following suffixes, 9G, 9-glucoside; MP, monophosphate; OG, *O*-glucoside; R, riboside. <LOD, less than the limit of detection.