

## Bayer et al. Suppl. Table S1

**Suppl. Table 1.** Overview of predicted chloroplast-localised protein kinases

Kinase	AGI	TargetP	Plastid localization predicted by <sup>1)</sup>	Reference
Kin 1	At1g14370	0,975	LOCtree, MultiLoc, TargetP	(Stael <i>et al.</i> , 2011)
Kin 2	At2g02800	0,978	LOCtree, MultiLoc, TargetP	(Stael <i>et al.</i> , 2011)
Kin 3	At2g17220	0,973	iPSORT, LOCtree, MultiLoc, Predotar, TargetP...	(Stael <i>et al.</i> , 2011; Schliebner <i>et al.</i> , 2008)
Kin 4	At4g35600	0,932	iPSORT, LOCtree, MultiLoc, Predotar, TargetP	(Stael <i>et al.</i> , 2011)
Kin 5	At1g26970	0,911	LOCtree, Predotar, TargetP, WoLFPSORT	this study
Kin 6	At1g53050	0,976	MultiLoc, TargetP, PredSL	this study
Kin 7	At1g69790	0,968	LOCtree, TargetP, PredSL	this study
Kin 8	At1g72540	0,976	LOCtree, TargetP, WoLFPSORT	this study
Kin 9	At3g44610	0,824	LOCtree, TargetP, PredSL	this study
Kin 10	At1g71530	0,769	LOCtree, MultiLoc, Predotar, TargetP, WoLFPSORT	this study
ABC1K1	At1g71810	0,461	iPSORT, LOCtree, TargetP, WoLFPSORT	this study, (Zybailov <i>et al.</i> , 2008)
ABC1K2	At1g79600	0,773	Predotar, TargetP, WoLFPSORT	this study, (Zybailov <i>et al.</i> , 2008; Ferro <i>et al.</i> , 2010)
ABC1K3	At4g31390	0,939	LOCtree, MultiLoc, Predotar, TargetP, WoLFPSORT	this study
CPK3	At4g23650	0,949	MultiLoc, TargetP, WoLFPSORT	(Mehlmer <i>et al.</i> , 2010)
CPK16	At2g17890	0,939	MultiLoc, Predotar, TargetP, WoLFPSORT	(Stael <i>et al.</i> , 2011)
CIPK13	At2g34180	0,576	iPSORT, MultiLoc, Predotar, TargetP	(Schliebner <i>et al.</i> , 2008)

<sup>1)</sup> Targeting prediction taken from the SUBA database (<http://suba.plantenergy.uwa.edu.au/>) (Heazlewood *et al.*, 2007), and the PredSL server: (<http://hannibal.biol.uoa.gr/PredSL/index.html>) (Petsalaki *et al.*, 2006)

### References:

**Ferro M, Brugiere S, Salvi D, Seigneurin-Berny D, Court M, Moyet L, Ramus C, Miras S, Mellal M, Le Gall S, Kieffer-Jaquinod S, Bruley C, Garin J, Joyard J, Masselon C, Rolland N.** 2010. AT\_CHLORO, a comprehensive chloroplast proteome database with subplastidial localization and curated information on envelope proteins. *Mol Cell Proteomics* **9**, 1063-1084.

**Heazlewood JL, Verboom RE, Tonti-Filippini J, Small I, Millar AH.** 2007. SUBA: the Arabidopsis Subcellular Database. *Nucleic Acids Res* **35**, D213-218.

**Mehlmer N, Wurzinger B, Stael S, Hofmann-Rodrigues D, Csaszar E, Pfister B, Bayer R, Teige M.** 2010. The Ca<sup>2+</sup>-dependent protein kinase CPK3 is required for MAPK-independent salt-stress acclimation in Arabidopsis. *Plant J* **63**, 484-498.

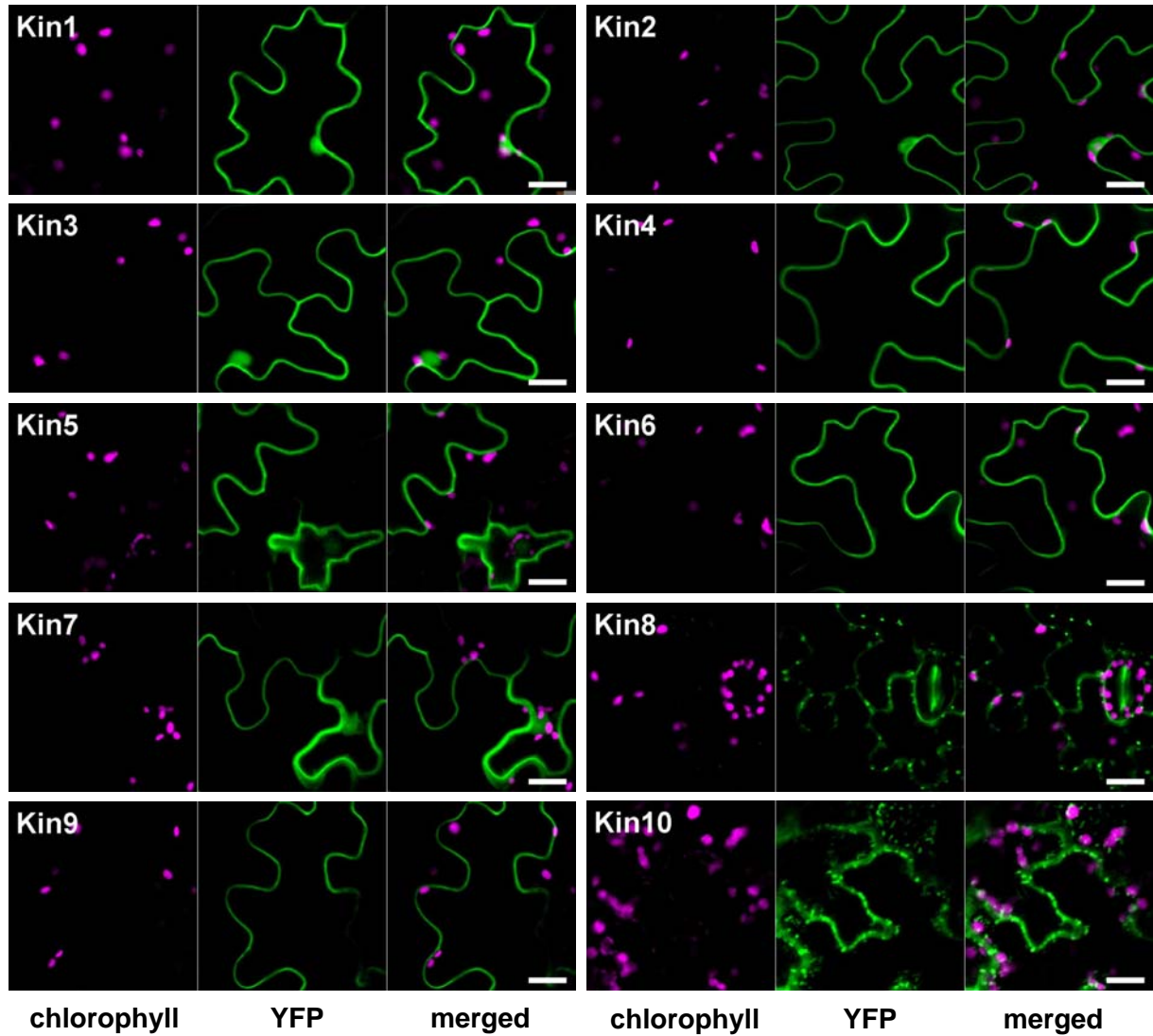
**Petsalaki EI, Bagos PG, Litou ZI, Hamodrakas SJ.** 2006. PredSL: a tool for the N-terminal sequence-based prediction of protein subcellular localization. *Genomics Proteomics Bioinformatics* **4**, 48-55.

**Schliebner I, Pribil M, Zuhlke J, Dietzmann A, Leister D.** 2008. A Survey of Chloroplast Protein Kinases and Phosphatases in Arabidopsis thaliana. *Curr Genomics* **9**, 184-190.

**Stael S, Bayer RG, Mehlmer N, Teige M.** 2011. Protein N-acylation overrides differing targeting signals. *FEBS Lett* **585**, 517-522.

**Zybailov B, Rutschow H, Friso G, Rudella A, Emanuelsson O, Sun Q, van Wijk KJ.** 2008. Sorting signals, N-terminal modifications and abundance of the chloroplast proteome. *PLoS One* **3**, e1994.

*Bayer et al. Suppl. Fig S1*



**Suppl. Fig. S1.** Localisation analysis of predicted chloroplast-localised protein kinases. Tobacco leaves infiltrated with genes of interest fused in front of YFP in the plant expression plasmid pBIN19 were analyzed by confocal laser scanning microscopy two days after infiltration. Chlorophyll autofluorescence (magenta) is shown in the first channel and the YFP signal (green) in the second channel. The third channel shows the merged image. Scale bar = 20 $\mu$ m.