

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Accessions used in this study and their root growth rate (RGR) values (in mm) and GWAS peaks.

File Name: Supplementary Data 2

Description: Mis-regulated genes in *srf3-3* mutants compare to WT in +Fe conditions.

File Name: Supplementary Data 3

Description: Identification of mis-regulated iron deficiency-related genes upon early defense response.

File Name: Supplementary Data 4

Description: DEGs under iron deficiency and *flg22* for 2 hours and their overlap.

File Name: Supplementary Data 5

Description: SRF3-dependent early Iron/defense core regulatory network.

File Name: Supplementary Data 6

Description: Primers.

File Name: Supplementary Data 7

Description: Entry and destination vectors used in the study.

File Name: Supplementary Movie 1

Description: Time lapse of WT plants under iron sufficient and low iron conditions for 12 hours.

File Name: Supplementary Movie 2

Description: Time lapse of *srf3-3* plants under iron sufficient and low iron conditions for 12 hours.

File Name: Supplementary Movie 3

Description: Time lapse of 5 day old plants expressing pUBQ10:H2B-mSCARLET under iron and low iron for 4 hours.

File Name: Supplementary Movie 4

Description: Time lapse of 5 day old plants expressing pSRF3::mCITRINE-NLS-mCITRINE under iron and low iron for 4 hours.

File Name: Supplementary Movie 5

Description: Time lapse of 5-day old plants expressing pUBQ10:SRF3-mCITRINE under iron and low iron for 4 hours.

File Name: Supplementary Movie 6

Description: Time lapse of 5 day old plants expressing pIRT1::NLS-3xYPet under iron sufficient condition, bright field (left), fluorescence (middle) and plants expressing pUBQ10::H2B-mSCARLET, fluorescence only (right).

File Name: Supplementary Movie 7

Description: Time lapse of 5 day old plants expressing pIRT1::NLS-3xYPet under low iron condition, bright field (left), fluorescence (middle) and plants expressing pUBQ10::H2B-mSCARLET, fluorescence only (right).

File Name: Supplementary Movie 8

Description: Time lapse of 5-day old WT plants under flg20 and flg22 conditions for 12 hours.

File Name: Supplementary Movie 9

Description: Time lapse of 5-day old srf3-3 plants under flg20 and flg22 conditions for 12 hours

File Name: Supplementary Movie 10

Description: Time lapse of 5-day old plants expressing pIRT1::NLS-3xYPet under flg22 condition, bright field (left), fluorescence (middle) and plants expressing pUBQ10::H2B-mSCARLET, fluorescence only (right)