

Supplementary Figure Legends

Supplementary Figure 1. Transcriptional response to low concentration of nitrate and nitrite of phosphoglycerate/bisphosphoglycerate mutase (PGM, At1g78050). Experimental procedures are as described in the legend of Figure 1.

Supplementary Figure 2. Transcriptional response of glucose-6-phosphate 1-dehydrogenase (At1g24280) to low concentration of nitrate and nitrite. Experimental procedures are as described in the legend of Figure 1.

Supplementary Figure 3. Transcriptional response of nitrate transporter *NRT1.1* to low concentration of nitrate and nitrite (At1g12110). Experimental procedures are as described in the legend of Figure 1.

Supplementary Figure 4. Comparison of transcriptional response of nitrite reductase in wild-type (WT) and null nitrate reductase mutant (NRDM) to 250 μ M of nitrate, nitrite and ammonia in 20 min. Experimental procedures are as described in the legend of Figure 1.

Supplementary Figure 5. Assay of nitric oxide production in seedlings. Surface-sterilized seeds were placed on 0.6% agarose medium plate incubated vertically under continuous light at 24°C. The ingredients of the medium were the same as those for hydroponics except that agarose was added to solidify the medium. Seedlings were taken after 5 d and placed in liquid nitrogen-free medium (the same liquid medium from which ammonium-succinate omitted) with 7.5 μ M DAF-FM added and incubated in the dark for 20 min at room temperature. KNO₂ or KCl was added to the specified final concentrations and the incubation continued for 20 min. At end of the incubation, seedlings were rinsed with fresh N-free medium and viewed for fluorescence under a Nikon Eclipse TE200-U fluorescence microscope.

Supplementary Figure 6. Assay of nitric oxide production in seedlings. Procedures were the same as in Supplementary Figure 5 except higher concentrations of KNO₂ or KCl were used.