

**Figure S1.** Glucose signaling activity of HXK1-GFP in protoplast transient expression assays. Protoplasts were isolated from greening maize leaves and transfected using PEG-Ca solution and 10  $\mu\text{g}$  of promoter-LUC cDNA, 4  $\mu\text{g}$  of UBQ-GUS cDNA, and either 6  $\mu\text{g}$  of carrier cDNA (control) or 6  $\mu\text{g}$  of effector cDNA. Glucose was added to 1 mM final concentration 2 h after transfection. Protoplasts were collected after 8 additional h of expression. Values are means  $\pm$  1 SD of assays done in triplicate, after normalizing LUC activities to GUS expression. CON = control; Glc = glucose; K1-HA = HXK1-HA; K1-GFP = HXK1-GFP; *RBCS* = promoter of small subunit gene of pea Rubisco; and *PPDK* = promoter of maize pyruvate Pi, dikinase gene.