

## LEGENDS TO SUPPLEMENTAL DATA

Figure S1. **Subcellular redistribution of HIP14 protein in response to magnesium using COS-7 epithelial cells.** Immunofluorescence staining of HIP14-GFP fusion protein of transiently expressing COS-7 cells. *A*, Golgi localization of HIP14. Cells were cultured in normal magnesium, fixed and incubated with GFP antibody (*left panel*) and the Golgi marker, GM130, (*center panel*). The merged image is given in *right panel*. *B*, Golgi localization of HIP14 in cells cultured in low magnesium media. Cells fixed and incubated with GFP antibody (*left panel*) and the Golgi marker, GM130, (*center panel*). The merged image is given in *right panel*. *C*, submembrane location of post-Golgi HIP14 protein. Cells were cultured in normal magnesium. HIP14 (*left panel*), phalloidin (*center panel*), and the merged image (*right panel*) are shown. Note the predominant submembrane localization of post-Golgi HIP14 protein. *D*, additional cell images from independent cell preparations at 2-fold digital enlargement of S2C. *E*, increase in HIP14 protein in post-Golgi vesicles and plasma membrane of cells cultured in low magnesium media. HIP14 staining (*left panel*), HIP14 merged with phalloidin (*center panel*), and graphic summary of increase in subplasma membrane HIP14 staining with low magnesium (*right panel*); values are means  $\pm$  S.E. in arbitrary units, n=76 cells. Note the increase in post-Golgi vesicle and plasma membrane HIP14 protein (*indicated by arrows*). *F*, Additional cell images from independent cell preparations at 2-fold magnification of Fig. S2E. *G*, absence of HIP14 protein in early recycling endosomes. COS-7 cells were cultured in normal media with normal magnesium concentration. HIP14 staining (*left panel*), Rab5 (*center panel*), and the overlay image (*right panel*). *H*, absence of HIP14 protein in early recycling endosomes. COS-7 cells were cultured in media with low magnesium. HIP14 staining (*left panel*), Rab5 (*center panel*), and the overlay image (*right panel*).

Fig. S1

