**Fig. S1.** Giantin is required for the formation of primary cilia in LLC-PK1 pig kidney epithelial cells. These cells form prominent primary cilia on reaching confluence and do not require serum starvation. (A) Effective depletion of giantin in LLC-PK1 as assessed by immunoblotting. (B) Deletion of giantin results in defective ciliogenesis. (C) Quantitation of ciliogenesis defect in giantin depleted LLC-PK1 cells. Bars = 10 μm.

**Fig. S2.** Suppression of GM130 in hTERT-RPE1 cells. (A) Immunoblotting shows effective suppression of GM130 using two independent siRNA duplexes. (B) Effective suppression is also shown by immunofluorescence. Targeting of giantin to the Golgi is unaffected. (C) Localization of GalT and giantin shows that the Golgi structure is disrupted. (D) The ability of GM130-depleted cells to form primary cilia is unaffected. (E) Quantitation of ciliogenesis in GM130-depleted cells. (F) GM130 depletion does not affect cilia length. Bars = 10 μm.

**Fig. S3.** Giantin suppression in hTERT-RPE1 cells does not affect localization of (A) GM130 or (B) GMAP210/TRIP11 to the Golgi. The inset in (A) shows a contrast adjusted version to demonstrate that some giantin remains. (C) Localization of ODF2/cenexin to the mother centriole does not require giantin. (D) Giantin suppression has no obvious effect on the organization of filamentous actin, or (E) Golgi or centrosome reorientation following scratch wounding of confluent monolayers.
Asante et al Supplementary Figure S1

A

GL2 siRNA Giantin siRNA D

Acetylated tubulin Pericentrin Merge

50 KDa

anti-Tubulin

250 KDa

anti-Giantin

B

GL2 siRNA

Giantin siRNA A

Giantin siRNA D

C

Ciliated cells (%)
Supplementary Figure S3

A

Giantin

GM130

Merge

GL2 siRNA

GL1 siRNA

B

Giantin

GM130

GL2 siRNA

GL1 siRNA

C

ODF2

GM130

Merge

GL2 siRNA

GL1 siRNA

D

GL2 siRNA

Gi1 siRNA

Gi2 siRNA

+ serum

- serum

Alexa-568-Phalloidin

E

Giantin

Ac-tubulin

Merge

GL2 siRNA

GL1 siRNA

Gi1 siRNA