## **Supplementary Figure legends**

Supplementary Figure S1. FAF1 interacts with  $\beta$ -catenin in C2C12 and KS483 cells. (A-B) KS483 (A) and C2C12 (B) cells were treated with MG132 (5  $\mu$ M) for 4 h, or not. Immunoprecipitation (IP) was performed with anti- $\beta$ -catenin antibody or a non-specific antibody (ns).  $\beta$ -catenin-associated FAF1 was detected by anti-FAF1 immunoblotting (IB). An aliquot of the total cell lysate was loaded as input control (left panel).

Supplementary Figure S2. Wnt3a reduces the interaction between  $\beta$ -catenin and FAF1. HEK293T cells transfected with control vector or Wnt3a plasmid were treated with or without MG132 (5  $\mu$ M) for 4 h.  $\beta$ -catenin/FAF1 association was examined by  $\beta$ -catenin immunoprecipitation (IP) followed by FAF1 immunoblotting (IB). Endogenous LEF-1 was analysed as positive control.

**Supplementary Figure S3. FAF1 has no effect in BMP signaling in HEK293T cells.** Control HEK293T cells or cells infected with lentiviral vectors that overexpress or knockdown FAF1 were treated with BMP6 for 1h as indicated. Cell lysates were analysed by immunoblotting (IB) for phosphorylated Smad1

Supplementary Figure S4. Effect of FAF1 overexpression and depletion on cytosolic  $\beta$ -catenin in TopFlash-GFP stable cells (A) Hela cells stably expressing TopFlash-GFP were infected with a lentiviral vector that overexpresses FAF1 or a vector expressing FAF1 shRNA. 48 h after infection, cells were treated overnight with or without Wnt3a conditional medium and analysed by microscopy. (B) Hela and C2C12 cells stably expressing TopFlash-GFP were treated as described above. Cells were then lysed for anti- $\beta$ -catenin and anti-FAF1 immunoblotting. Actin was included as a loading control.

A

В

## HeLaTopFlash-GFP stable cells (4X view)





## HEK293T



