

## Supplemental Information.

**Supplemental Figure 1: Predicted downstream targets of miR-184.** Based on bioinformatics analyses, 11 candidate binding sites in Wnt ligands (**A**) and Wnt-related receptors (**B**) were selected for the miRNA target verification assays.

**Supplemental Figure 2: Verification of downstream target of miR-184.** Predicted binding site of the potential downstream targets of miR-184 was cloned into a miRNA target assay vector (pmirGLO, Promega, Madison, WI). The miRNA assay vector either containing scrambled sequence of miR-184 (**scrambled**, negative control), reverse-complementary sequence of miR-184 (**MIR-184**, positive control) or predicted target sequence of miR-184 (indicated target genes, Suppl. Fig. 1A and 1B) were co-transfected with 25 nM of either negative control miRNA (**Nc**) or miR-184 mimic (**miR-184**) into 293A cells and dual-luciferase assay was conducted at 48 hr post-transfection. Luciferase-based assay indicated the results on Wnt ligands (**A**) and Wnt-related receptors (**B**), respectively. These results showed that the expression of luciferase with the target site of *Fzd7* was significantly decreased by miR-184, while others showed insignificant changes or just minor reductions of firefly luciferase (mean  $\pm$  SEM, n=3, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001 by student t-test).

**(A)**

Wnt9a-1 5' U ACAU C 3'  
 ACC UUAG UCUCUGUCC  
 UGG AGUC AGAGGCAGG  
 miR184 3' GAAU A U 5'

Wnt9a-2 5' G C GC 3'  
 CUUU UCAGUU CUCUGUCC  
 GGAA AGUCAA GAGGCAGG  
 miR184 3' UG U U 5'

Wnt10b-1 5' A UGC A G 3'  
 GCCCUU UCGG UUUCUGUCUA  
 UGGGAA AGUC AGAGGCAGGU  
 miR184 3' U A 5'

Wnt10b-2 5' G GGA C U U 3'  
 GCUCUUG GG UUCUCC UCCG  
 UGGGAAU UC AAGAGG AGGU  
 miR184 3' AG C 5'

Wnt16 5' G UUGCCU GGGACUGCUGAUAG U 3'  
 5'end CCUUAUC AG UCUCUGUCC  
 GGAAUAG UC AGAGGCAGG  
 miR184 3' UG A U 5'

**(B)**

Fzd1 5' G U G 3'  
 GCCC AUCA UUUUCC GUCCG  
 UGGG UAGU AAGAGG CAGGU  
 miR184 3' AA C 5'

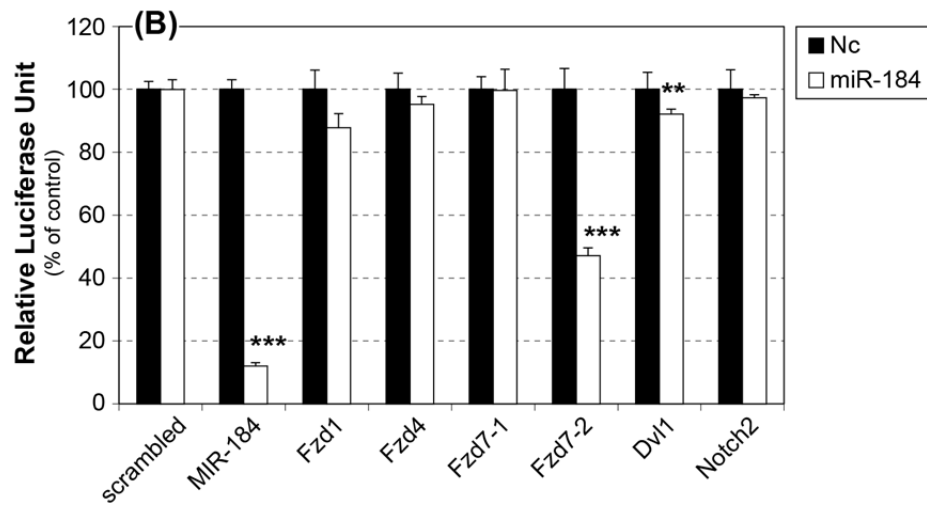
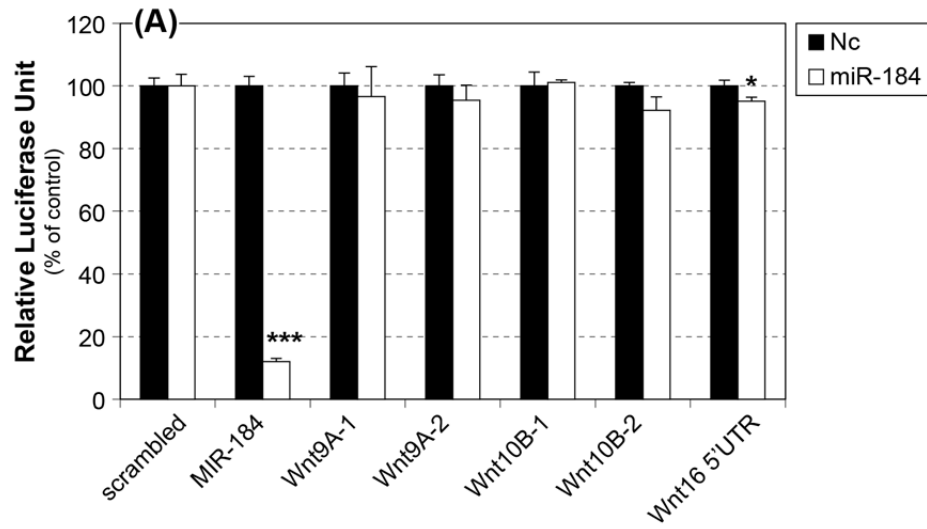
Fzd4-1 5' A AU A 3'  
 GCCCUUA GUUU UGUCCA  
 UGGGAAU CAAG GCAGGU  
 miR184 3' AGU AG 5'

Fzd7-1 5' G G UUUCCCC G C 3'  
 GCC CUUGUC UUCUC UGUCCG  
 UGG GAAUAG AAGAG GCAGGU  
 miR184 3' UC 5'

Fzd7-2 5' U CCU C A 3'  
 GCCC UC UUCCGUCCA  
 UGGG AG GAGGCAGGU  
 miR184 3' AAU UCAA 5'

Dvl1 5' G GU UG U 3'  
 GCCCU UC UUUUCUGUUC  
 UGGGA AG AGAGGCAGG  
 miR184 3' AU UCA U 5'

Notch2 5' U GA G 3'  
 GCCC CGG CUCUGUCCA  
 UGGG GUC GAGGCAGGU  
 miR184 3' AAUA AA 5'



Suppl. Fig. 2 Y Takahashi et al