# Dual roles of endothelial FGF-2-FGFR1-PDGF-BB and perivascular FGF-2-FGFR2-PDGFRβ signaling pathways in tumor vascular remodeling

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**Running title**: FGF-2 promotes tumor vessel remodeling

The authors declare no potential conflicts of interest.

## Supplementary figures and figure legends

Figure S1

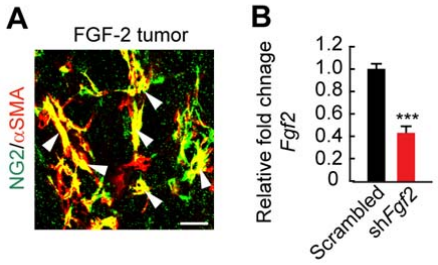


**Fig. S1. αSMA and NG2 staining and knockdown efficiency**

(A) $NG2^+$ (green) and $\alpha SMA^+$ (red) staining. Arrowheads indicate double positive signals. Bar = 50 μm. Images are shown using whole mount staining.

(B) *Fgf2* mRNA expression levels in *scrambled-RNA*- and *Fgf2-shRNA*-transfected $FGF\text{-}2^+$ tumors (n = 3 independent measurements/group).

Data as means ± SEM; Student's *t* test, *** P<0.001.

Figure S2

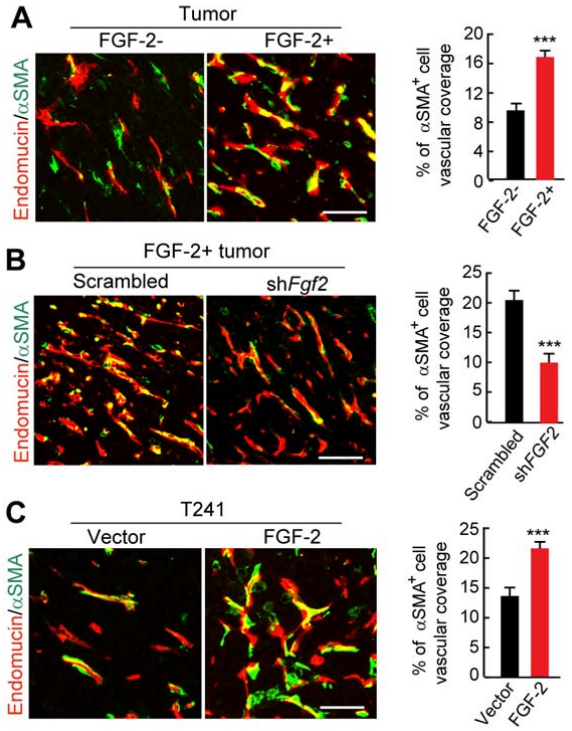


**Fig. S2. αSMA and endomucin staining**

Endomucin endothelial (red) and αSMA cells (green) in FGF-$2^+$ and FGF$^-$ (A), *scrambled-shRNA* and *Fgf2-shRNA*-transfected FGF-$2^+$ (B), and T241-vector and T241-FGF-2 tumors (C). Bar = 50 μm. Quantification of αSMA$^+$ pericyte coverage (n = 10 random fields/group) are shown respectively. Images are presented using immunohistochemistry method.

Data as means ± SEM; Student's *t* test, *** P<0.001.

Figure S3

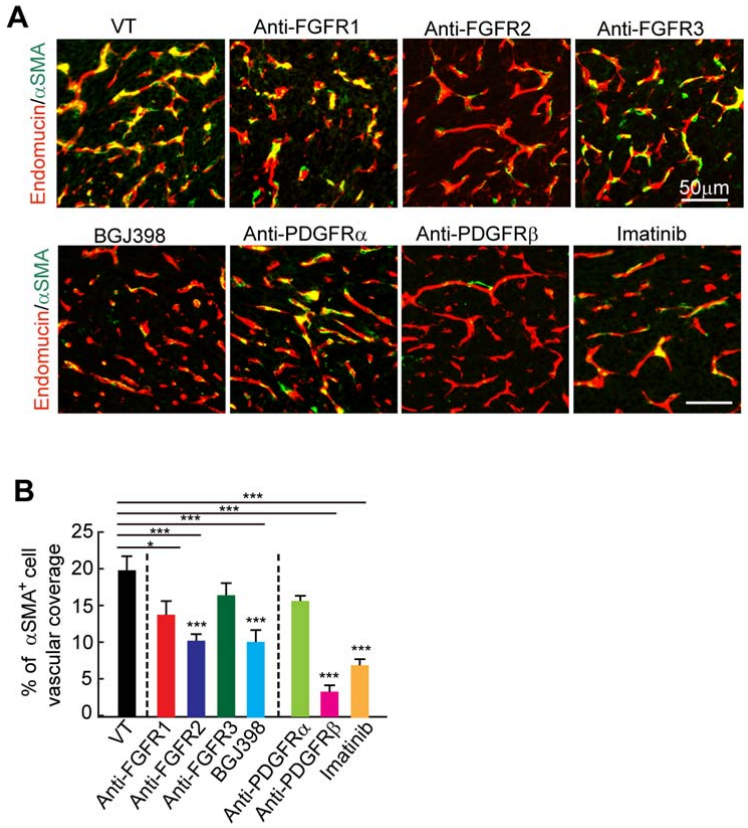


**Fig. S3. Effects of FGF and PDGF signaling inhibition in FGF-2 tumors**

(A) Endomucin endothelial (red) and αSMA cells (green) in vehicle (VT)-, anti-FGFR1 antibody-, anti-FGFR2 antibody treated-, anti-FGFR3 antibody-, BGJ398-, anti-PDGFRα antibody-, anti-PDGFRβ antibody-, and imatinib-treated FGF-2$^{+}$ tumors. Bar = 50 μm. Images are obtained using immunohistochemistry method

(B) Quantification of αSMA$^{+}$ pericyte coverage in FGF-2$^{+}$ tumor vasculatures (n = 10 fields/group).

All data as means ± S.E.M; Student's *t* test, * P<0.05, ** P<0.01 and *** P<0.001.

Figure S4

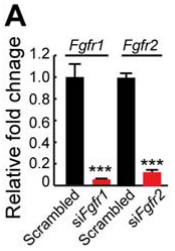


**Fig. S4. Knockdown efficiency of *siFGF2-RNA***

(A) *Fgfr1* and *Fgfr2* mRNA expression levels in *Scrambled-siRNA*-, *siFgfr1-RNA*-, and *siFgfr2*-RNA-transfected pericytes (n = 3 independent measurements/group).

Data as means ± SEM; Student's *t* test, *** P<0.001.

Figure S5

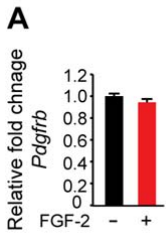


**Fig. S5. *Pdgfrb* gene expression level in pericytes.**

(A) *Pdgfrb* mRNA expression levels in FGF-2-stimulated pericytes (n = 3 samples /group).

Data as means ± SEM; Student's *t* test. Experiments were repeated three times.

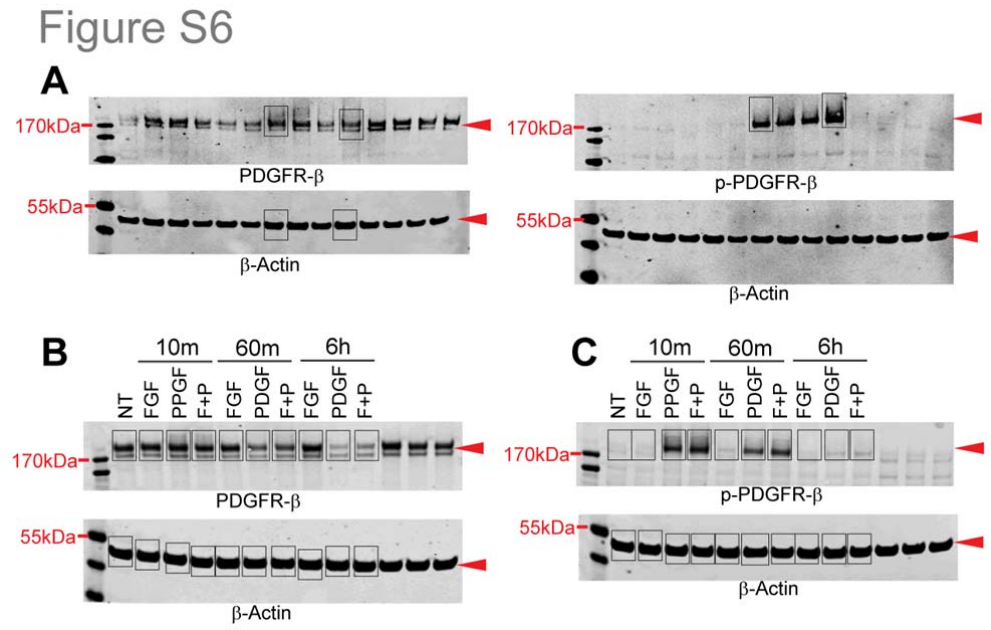


**Fig. S6. Original full length western blots used for Fig. 5.**

(A) Original western blots used for Fig. 5A.

(B) Original western blots used for Fig. 5B.
NT=no treatment; FGF =FGF-2; PDGF =PDGF-BB; F+P = FGF-2 +PDGF-BB

(C) Original western blots used for Fig. 5C.
NT=no treatment; FGF =FGF-2; PDGF =PDGF-BB; F+P = FGF-2 +PDGF-BB

Cropped parts presented in Fig. 5A-C were marked with black squares.

Figure S7

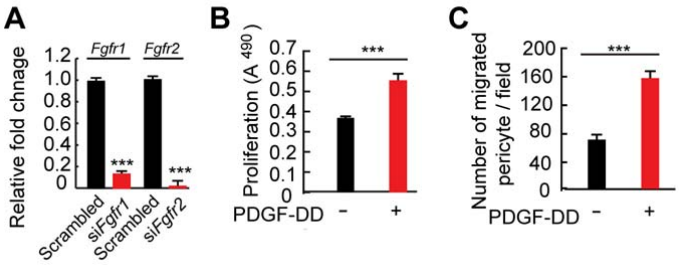


**Fig. S7. *Pdgfrb* mRNA expression levels in pericytes.**

(A) *Fgfr1* and *Fgfr2* mRNA levels in ECs (n = 3 independent measurements/group).

(B) Pericyte proliferation after PDGF-DD stimulation (n = 6 samples/group).

(C) Pericyte proliferation after PDGF-DD stimulation (n =6 samples/group).

Data as means ± SEM; Student's *t* test, *** P<0.001. Experiments were repeated three times.