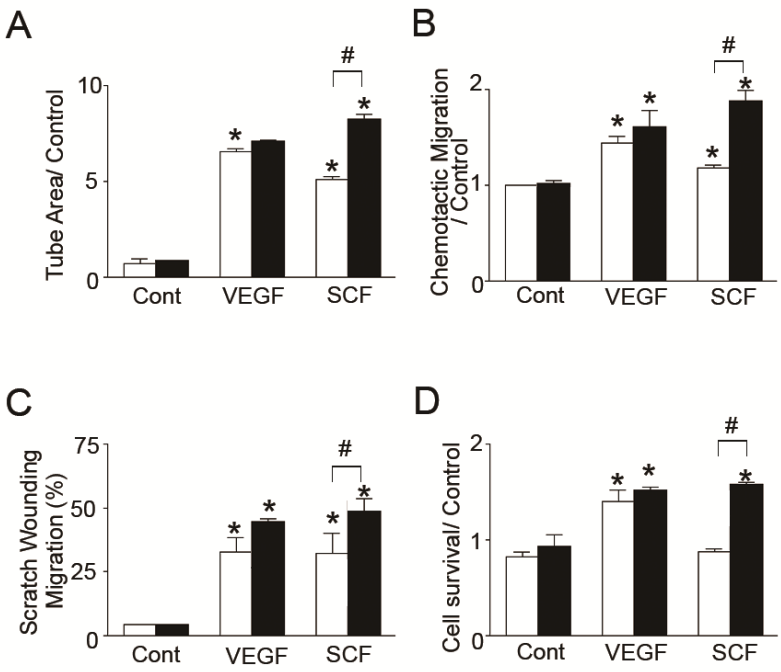
Supplementary Table I. Primer sequences

Primer	Forward (5' to 3')	Reverse (5' to 3')	Product (bp)
Nanog	tatctggtgaacgcatctgg	gaagttatggagcggagcag	195
Oct3/4	agctgctgaagcagaagagg	ctcattgttgtcggcttcct	194
Brachyury	tttcttgctggacttcgtga	tccattgagcttgttggtga	196
Mesp 1	actcagcgaggacaacct	gatgggtcccacgattct	195
Flk-1	tgcctacctcacctgtttcc	tctgtctggctgtcatctgg	196
Islet1	tcatccgagtgtggtttcaa	ggctggtaactttgcacctc	196
Nkx2.5	ccagaaccgtcgctacaagt	gggtaggcgttgtagccata	195
CD31	atgacccagcaacattcaca	cacagagcaccgaagtacca	200
VE-Cadherin	caatgacaacttccccgtct	tcgttacgtttggggtctgt	195
α-SMA	gtgcctatctatgagggcta	gccatctcattttcaaagtc	197
Myocardin	agttgtacactccttctgtg	atccataggggaattcagat	197
GAPDH	atgactccactcacggcaaa	atgatgacccttttggctcc	227

Supplementary Table II. siRNA sequences

siRNA Target Gene	siRNA sequence (5' to 3')
Human c-Kit	1. UCAUUCUUGAUGUCUCUGGtt 2. UUUGAGUUCAGACAUGAGGtt 3. UCUUAUAAAGUGCAGCUUCtt 4. UACAAUGCCAUUCUGAAGCtt
Human Scl	1. UUAGGAAAGACAGGGAUCCtt 2. AAAGCAUUCAUAGGACAGGtt 3. UACAGUACAACGUUGACGGtt
Human LMO2	1. AUUGAUCUUAGUCCACUCGtt 2. UUACUAUGGAUGGGCUGUGtt 3. AUCAAUUGCACAUCUCUAGtt
Human GATA2	1. UUUCAUACUAGGGCUGUGGtt 2. UAAGUUACUUCUGGCCGUGtt 3. AAAGGAAUAAGAGGAUAGCtt
Human Control siRNA	AAUGGAAGACCACUCCCACUC

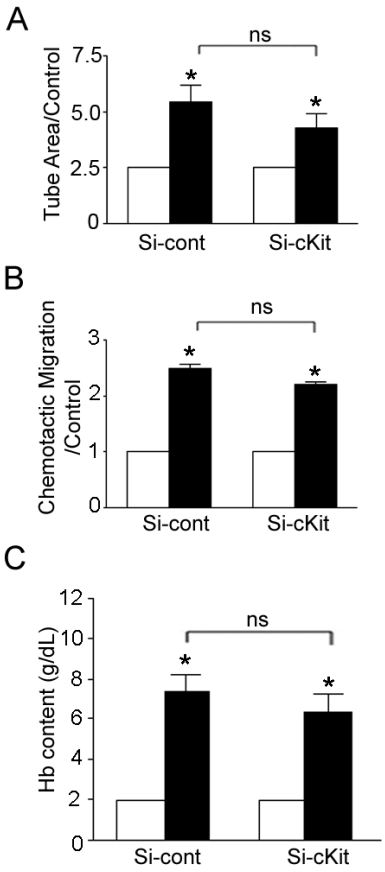
Supplementary Figure I.



SCF markedly increases *in vitro* neovascularization activity of EPCs, but has moderate effects on human dermal microvascular endothelial cells (HDEMCs).

Quantitative analysis of tube formation (A), chemotatic cell migration (B), scratch wounding migration (C), and cell survival (D) in HDMECs (white bars) and EPCs (black bars) was performed in response to recombinant human SCF (10 ng/ml) or VEGF (10 ng/ml). Chemotactic migration, tube formation, and cell survival responses of EPCs to SCF or VEGF were compared by normalizing the values relative to those of the corresponding PBS controls. Scratch wounding migration was assessed by measuring the relative area covered by cells that had migrated from the wound edges. (*$p < 0.05$ vs. PBS control, $^{\#}p < 0.05$, $n = 4$).

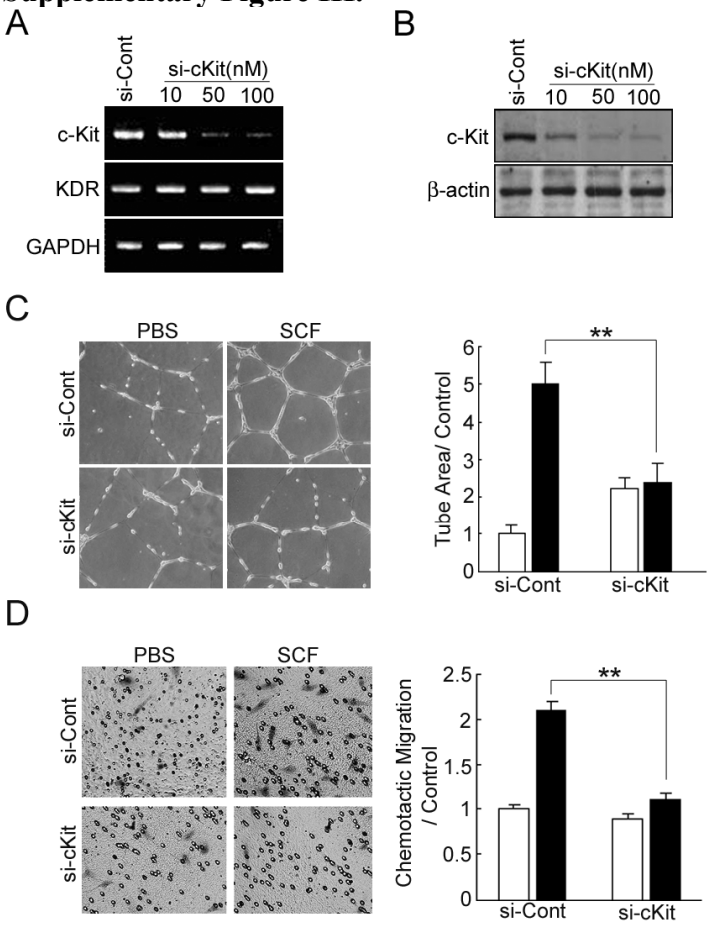
Supplementary Figure II.



Knockdown of c-Kit expression has no effect on VEGF-induced increase in *in vitro* and *in vivo* neovascularization activity of EPCs.

In vitro angiogenesis (A: tube formation, B: chemotatic cell migration) and *in vivo* Matrigel plug assays (C) were performed with EPCs transfected with c-Kit specific siRNA (si-cKit) or control siRNA (si-cont) in response to recombinant human VEGF (black bars, 10 ng/ml for *in vitro* assay or 200 ng in 0.6 ml of Matrigel for *in vivo* assays) or PBS control (white bars). *In vitro* and *in vivo* assays were performed as described. Cellular responses to VEGF were compared by normalizing their values relative to those of the corresponding PBS control (*$p < 0.05$ vs. PBS control, $n = 3$, ns: not significant).

Supplementary Figure III.

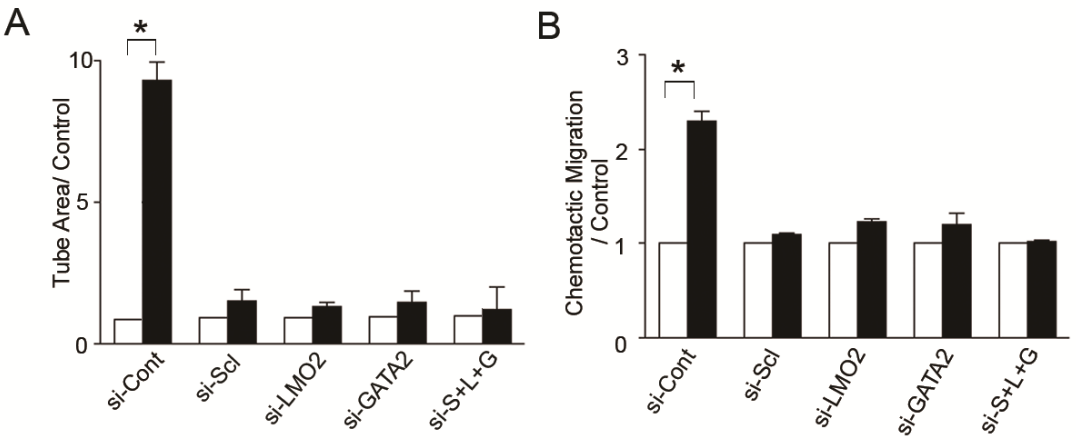


SCF increases the angiogenic activity of HUVECs through c-Kit receptor.

(A-B) c-Kit expression was substantially reduced by transfection with c-Kit specific siRNA. HUVECs were transfected with various concentrations of c-Kit specific siRNA (si-cKit) or control siRNA (si-Cont). After 48 h, reduced c-Kit mRNA and protein expression was confirmed by RT-PCR (A) and western blotting (B). The mRNA or protein levels of KDR, GAPDH, β- actin were analyzed as loading controls. (C-D) silencing c-Kit abrogates the SCF-induced increase in tube formation and migration of HUVECs. Representative images and quantitative analysis of tube formation (C) and chemotatic migration (D) in c-Kit silenced HUVECs in response to recombinant human SCF (10 ng/ml, black bars) or PBS

control (white bars). Cellular responses to SCF were compared by normalizing their values relative to those of the corresponding PBS control (**$p < 0.01$, $n = 5$).

Supplementary Figure IV.



Silencing of Scl, LMO2, or GATA2 abrogates SCF-induced increase in neovascularization activity of EPCs.

Tube formation (A) and chemotatic cell migration (B) were performed with siRNA-transfected EPCs in response to recombinant human SCF (10 ng/ml, black bars) or PBS control (white bars). (*$p < 0.05$, $n = 4$).