Supplemental figure 1

(A) Representative pictures of retina immunostaining of Isolectin B4 (red, upper panels) or Isolectin B4 (red, lower panels) and desmin (green lower panels) in P8. Scale bar, $500 \mu \mathrm{~m}$ (upper panels) and $100 \mu \mathrm{~m}$ (lower panels). (B) The effect of APB5 on retinal radius and vessel diameter in P8 ( $\mathrm{n}=6$ ). (C) Representative pictures of retina immunostaining of Isolectin B4 (red) and fibrinogen (green) in P8. Scale bar, $100 \mu \mathrm{~m}$. (D) Representative pictures of retina immunostaining of Isolectin B4 (red) and F4/80 (green) in P8. Scale bar, $100 \mu \mathrm{~m}$. * Significantly different from the results in vehicle treated mice at $\mathrm{p}<0.05$. Data are presented as means $\pm$ SEM.

## Supplemental figure 2



Representative pictures of retina in situ hybridization of Cxcr4 (purple) and collagen IV (brown) in P8.White arrow heads indicate double positive staining reagion of Cxcr4 and collagen IV.; Scale bar, $50 \mu \mathrm{~m}$.

## Supplemental figure 3


(A) Representative pictures of retina immunostaining of Isolectin B4 (red) and F4/80 (green) in P8. Scale bar, $100 \mu \mathrm{~m}$. (B) Representative pictures of retina immunostaining of Isolectin B4 (red) in P8. Scale bar, $100 \mu \mathrm{~m}$. (C) Representative pictures of retina immunostaining of Isolectin B4 (red) and fibrinogen (green) in P8. Scale bar, $100 \mu \mathrm{~m}$.

Table S1. Primer sequences for PCR.

| Target | Forward primer | Reverse primer |
| :---: | :---: | :---: |
| SDF-1 $\alpha$ (CXCL12) | ATCGCCAGAGCCAACGTCAAG | GGCACAGTTTGGAGTGTTGAG |
| CCL2 | TGCCCTAAGGTCTTCAGCAC | AAGGCATCACAGTCCGAGTC |
| CCL7 | TCCTCACCGCTGTTCTTTCT | TTAGGCGTGACCATTTCACA |
| CCL12 | GTCCTCAGGTATTGGCTGGA | CGGACGTGAATCTTCTGCTT |
| CCL20 | AAGACAGATGGCCGATGAAG | CACCCAGTTCTGCTTTGGAT |
| ICAM-1 | TTCCAGCTACCATCCCAAAG | CTTCAGAGGCAGGAAACAGG |
| VCAM-1 | ACAGACAGTCCCCTCAATGG | GTCACAGCGCACAGGTAAGA |
| E-selectin | CGTTTGACTGTGTGGAAGGG | ACAGGTCACAGCTTTGCATG |
| Tbp | CCCCCTCTGCACTGAAATCA | GTAGCAGCACAGAGCAAGCAA |
| $18 s$ rRNA | CGTTCTTAGTTGGTTGGAGCG | AACGCCACTTGTCCCTCTAA |

