Legends for Supplementary Figures

Fig. S1 Real time movie of glomerular endothelial cells (GEC) on Col V fibrils and Col I fibrils,. (A) GEC moved dynamically with fillopodia on Col V fibrils; (B) GEC kept forming round shape and showed less movement on Col I fibrils.

Fig. S2 (A) Comparison of dot blot of Col V containing extract fractions between wound skin of patients with normal human skin. High molecular weight fractions (Nos. 20-26) related to super structure of Col. V fibrils were positive in dot blots for patient skin, while no positive dot blots could be found in the normal human skin. (B) Comparison of dot blot of Col V containing extract fractions between mice embryonic kidney of E15 and adult kidney. High molecular weight fractions (Nos. 20-26) related to super structure of Col. V fibrils were positive in dot blots for embryonic kidney, while no positive dot blots could be detected in adult kidney. These data imply that Col V fibrils may have some function in vivo.

Proteins of human skin solubilized by 6M guanidine HCl were separated by size on a Sepharose CL-2B molecular sieve column (total volume=300ml) at a low rate of 0.3 ml/min. The fractions were collected every 3 ml. Dot blot analysis was performed using a nitrocellulose filter spotted with 5μl from every other fraction. The blot was blocked with 5% non-fat milk in 0.1% Tween 20-TBS for 1 h and then incubated with mAb against Col V, diluted 1:1000 in 2% non-fat milk in 0.1% Tween 20-TBS, the blots were incubated with peroxidase-conjugated anti-mouse IgG (Dako). The blots were developed with chemiluminescent substrate (ECL). Proteins of mice embryonic kidney of E15 and adult kidney were also performed in the same procedure.

Fig. S3 Paxillin pY31 revealed no different localizations between GEC cultured on Col V fibrils and Col I fibrils.

Immunofluorescence analyses of pY31 was stained with primary antibody conjugated with secondary antibody labeled by Alexa Fluor 488 (green), which was then observed by TIRF microscopy. Actin cytoskeleton was stained with Rhodamin-phalloidin (red). (A) paxillin pY31was localized centrally in GEC cultured on Col I fibrils; (B) paxillin pY31 was localized centrally in GEC cultured on Col V fibrils. Scale bar, 25μm.