研究業績　英文表記

和文	
表題	生命科学における進歩　－　鎖特異的モノクローラル抗体を用いたラット糸球体基底膜の IV 型コラーゲンα鎖の微細構造的分布
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英文	
Title	Advancement of Life Science —Fine structural localization of collagen type IVα chains in the rat glomerular basement membrane using chain-specific monoclonal antibodies
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Abstract	**Background and aim.** Type IV collagen consists of six distinct α chains. Our monoclonal antibodies distinguish then, and are available for immune fluorescence microscopy. Immunohistochemistry of the α(IV) chains are now recognized to be important for understanding their possible functions and a diagnosis of Alport syndrome, the renal disease caused by mutations in collagen type IV genes. The purpose of this study was to evaluate the reactivity of our antibodies in an immune electron microscopy. **Methods.** Rat kidneys were fixed with perfusion of 2% paraformaldehyde, and embedded in Lowycryl K4M or LR White. Ultra-thin sections were stained with the chain-specific monoclonal antibodies, which were visualized with gold-labeled anti-rat IgG antiserum. **Results.** Collagen type IV α1 through α5 chains were demonstrated with the antibodies, H11, H22, H31, H41, and H52, respectively, but α6 chain was not, α1 and α2 chains were demonstrated strongly in Mesangial matrix and weakly in the subendothelial side of glomerular basement membrane. α3, α4, and α5 chains were in the entire thickness of the glomerular basement membrane. **Conclusions.** Immuno electron microscopy could demonstrate α(IV) through α5(IV) chains in the rat renal basement membrane. GBM is not uniform in the composition of α(IV) chain.
keyword	collagen type IV, glomerular basement membrane, immune electron microscopy

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