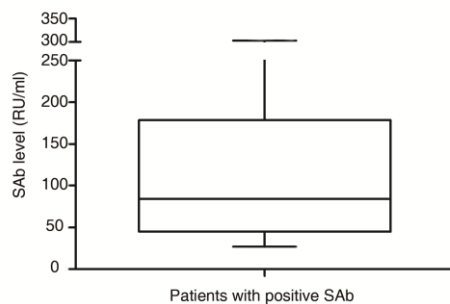


Supplementary Table 1

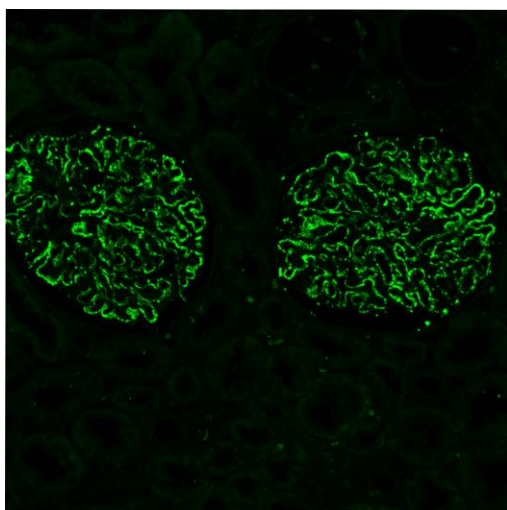
Consistency between ELISA and IFT method for detection of SAb in 670 samples from patients with IMN

	ELISA (+)	ELISA (-)	Total
IFT (+)	428	32	460
IFT (-)	20	190	210
Total	448	222	670

Overall agreement was 92.2%, Kappa Value was 0.82

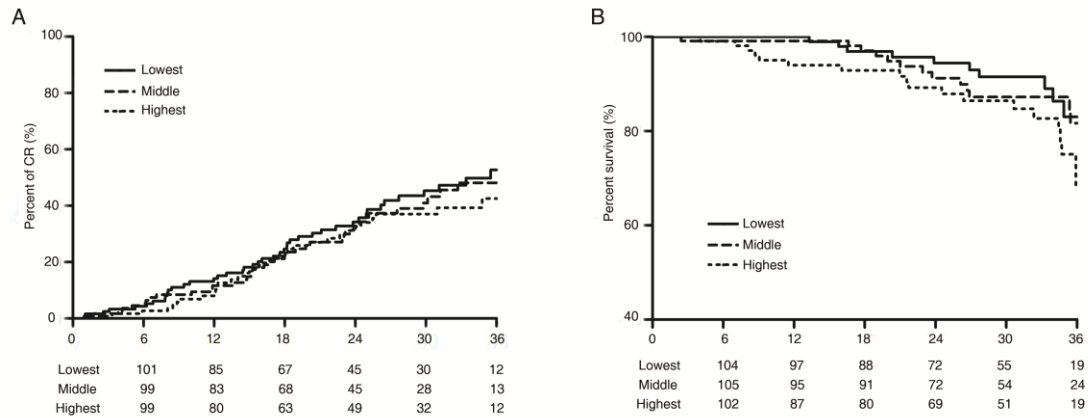


Supplementary Figure 1. Serum anti-PLA2R antibody (SAb) level in 392 SAB+ patients. Median: 84 RU/ml, Interquartile range: 45-178.3 Ru/ml.

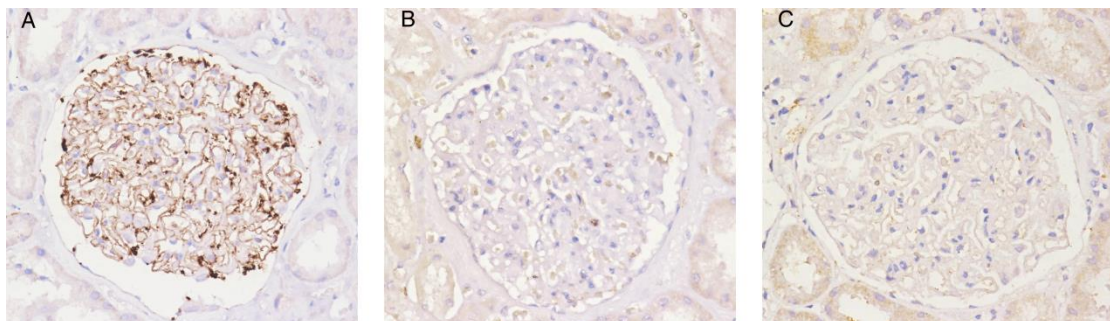


Supplementary Figure 2. Glomerular PLA2R Antigen deposit. Biopsy sample from GAg+ patient shows that PLA2R antigens formed a fine granular pattern in sub-epithelial deposits along the glomerular capillary loops.(Original magnification,

×200)

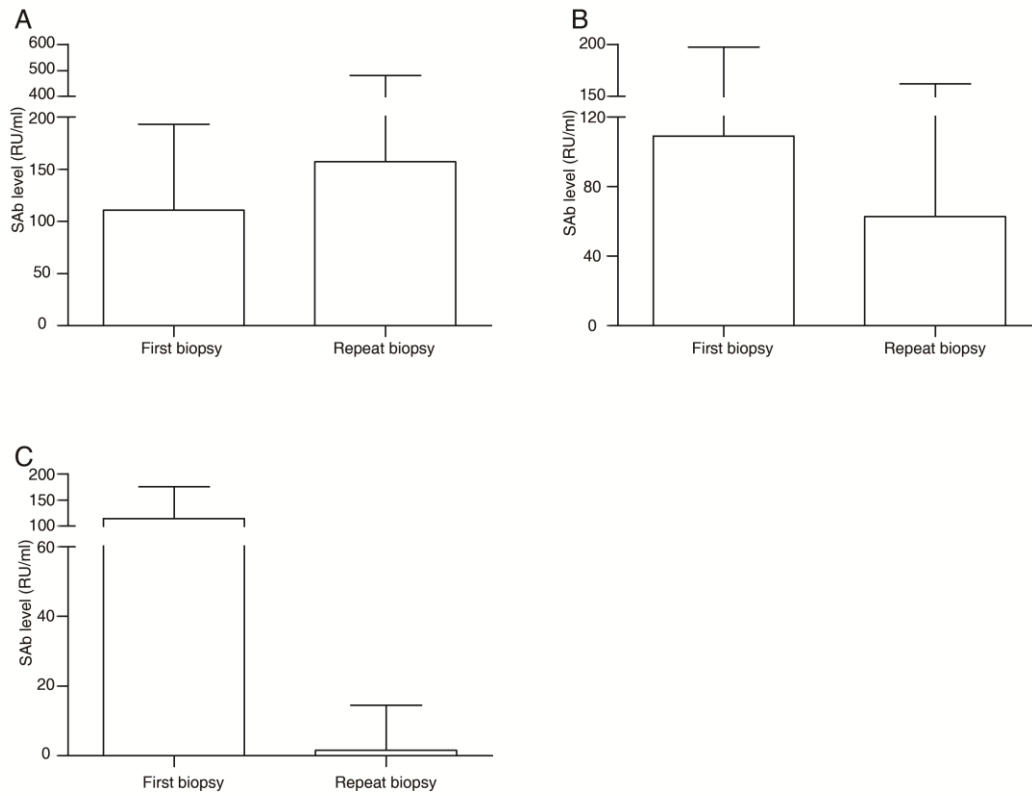


Supplementary Figure 3. (A) Survival curve for reaching complete remission in patients with positive SAb. Highest versus lowest tertile: $P=0.4$, Highest versus middle tertile: $P=0.7$, Middle versus lowest tertile: $P=0.7$ (B) survival curve for reaching $>40\%$ decline of eGFR in patients with positive SAb. Highest versus lowest tertile: $P=0.2$, Highest versus middle tertile: $P=0.04$, Middle versus lowest tertile: $P=0.8$. Patients were divided into tertiles according to the antibody level. The numbers of at-risk patients at selected time points (6, 12, 18, 24, 30 and 36 months) are indicated below the plot; **Log-rank method was used to evaluate the significance of differences.**

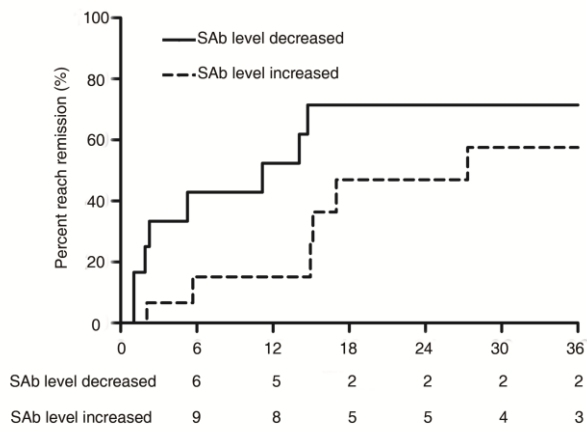


Supplementary Figure 4 (A). THSD7A antigen deposit in patients without PLA2R antigen deposit; (B). THSD7A antigen staining in normal control; (C). THSD7A antigen staining in patients with PLA2R antigen deposit. (Original magnification, $\times 400$, 3,3'-diaminobenzidine (DAB)/Horseradish Peroxidase (HRP) visualizing

system)



Supplementary Figure 5 (A). Change of median SAb level in patients failed to achieve remission (NR) (110.9 vs 157.3 RU/ml, $P=0.6$); **(B).** Change of median SAb level in patients relapsed (109.2 vs 62.7 RU/ml, $P=0.2$); **(C).** Change of median SAb level in patients achieved remission (114.9 vs 1.6 RU/ml, $P=0.001$). Only patients with SAb+ at the first biopsy were included. Data was shown as median & interquartile range and compared using Mann-Whitney test.



Supplementary Figure 6 Kaplan Meier analysis comparing the follow up remission rate in patients with SAb level decreased and patients with SAb level increased (P=0.04). Log-rank method was used to evaluate the significance of difference.