

**Supplemental information**

**Deletions in *VANGL1* are a risk factor for  
antibody-mediated kidney disease**

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# Supplementary Figure 1

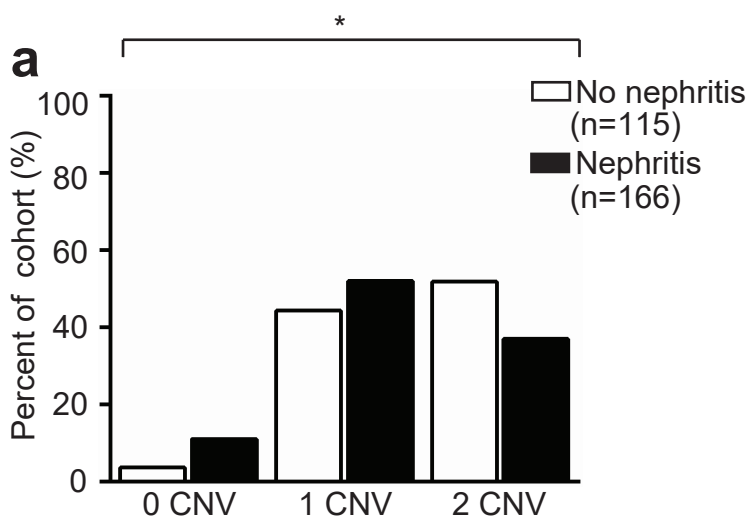


Figure S1. *VANGL1* CNV association with nephritis. Association of copy number variation in *VANGL1* detected by qPCR with the presence or absence of nephritis in SLE;  $\chi^2=2.1$ , 1 d.f.,  $p=0.14$  (CNV: Copy number variation). Related to Figure 1

## Supplementary Figure 2

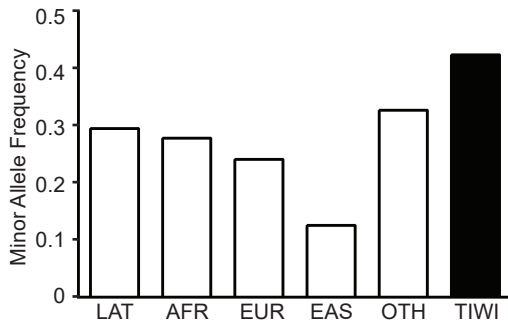


Figure S2. Increased frequency of *VANGL1* CNV in the Tiwi Islands a) Minor Allele Frequency of *VANGL1* CNV in different ethnicities; LAT: Latino, AFR: African, EUR: European, EAS: East Asian, OTH: Other. b) Number of individuals in the Tiwi Islands with a *VANGL1* CNV according to stage of kidney disease. (CKD = chronic kidney disease). Related to Figure 1

# Supplementary Figure 3

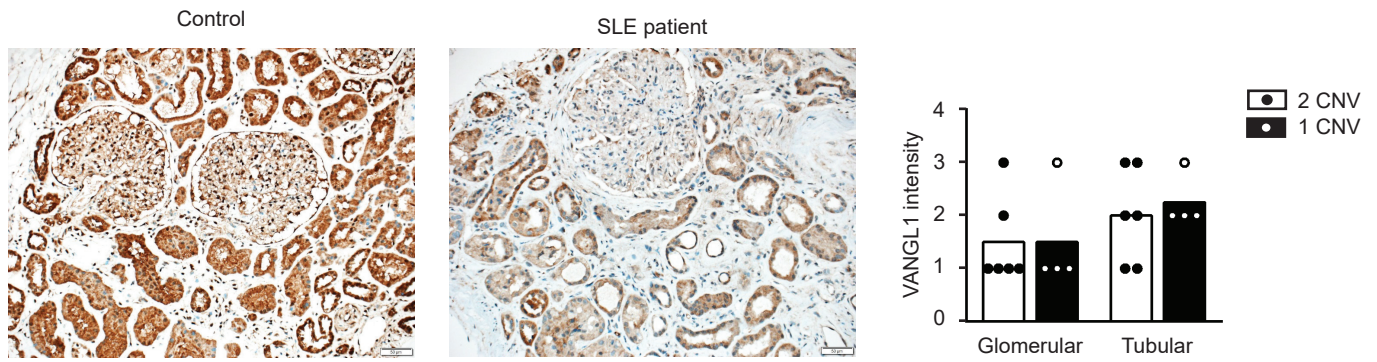


Figure S3. VANGL1 expression in human kidney samples. Representative VANGL1 expression and quantification in healthy and SLE patients with total glomerular and tubular scores. Related to Table 2

## Supplementary Figure 4

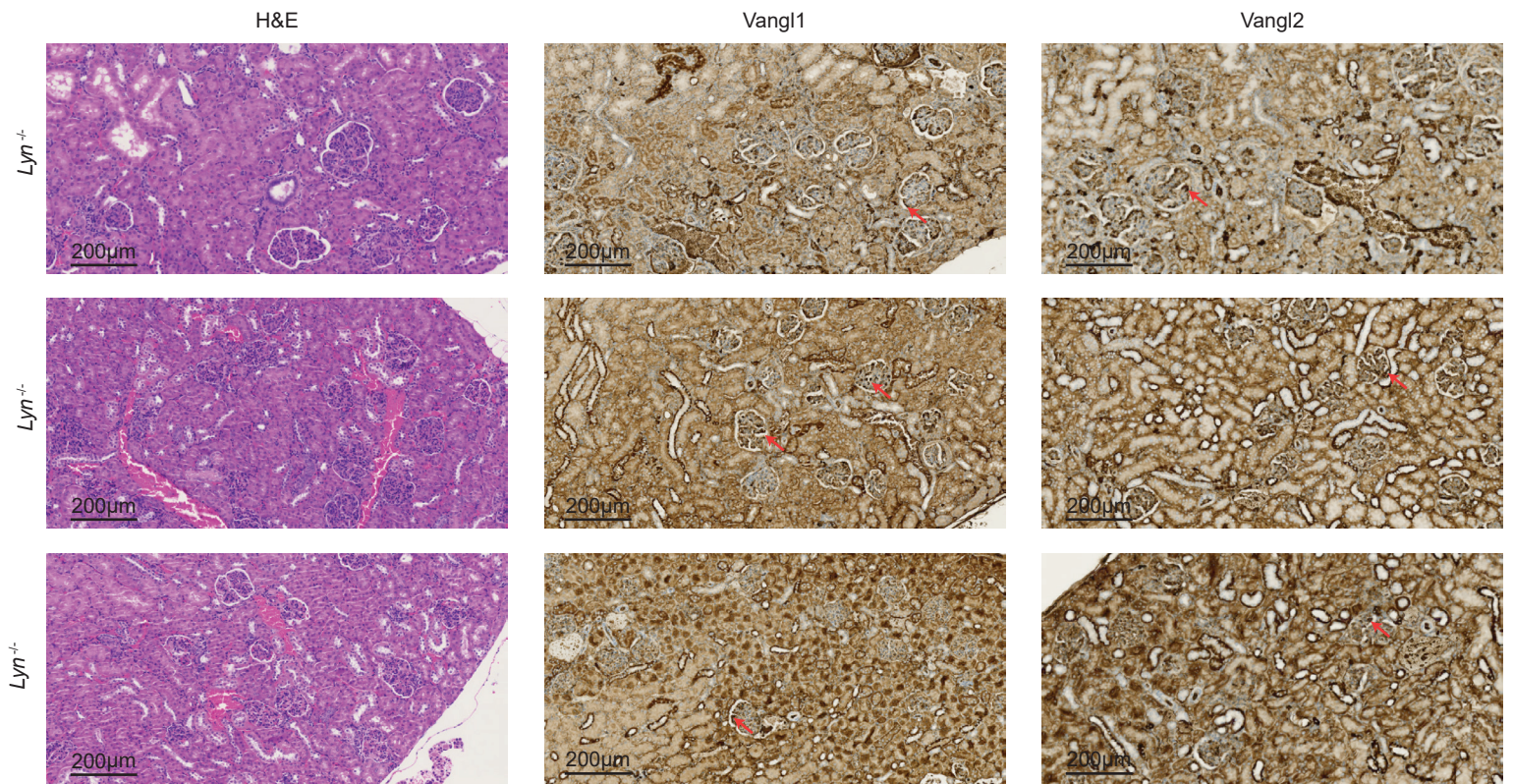


Figure S4. Vangl1 and Vangl2 expression in mouse glomeruli. Kidney sections from 12 week old *Lyn<sup>-/-</sup>* mice with glomerulonephritis and corresponding scattered glomerular expression of Vangl1 and Vangl2 (red arrow). Related to Figure 3