

SIGNIFICANCE STATEMENT

Albuminuria is strongly correlated with tubulointerstitial inflammation, but the mechanisms through which proteinuria contributes to renal injury remain unclear. This study examines the novel role of tubular epithelial cell (TEC) exosomes in transferring an inflammatory signal to macrophages in mouse kidney injury models and in patients with IgA nephropathy. This study demonstrates that in the setting of proteinuric kidney disease, exosomes are released in greater numbers by TECs packaged with CCL2 mRNA, which can be delivered to interstitial macrophages. TEC exosomes may constitute a critical mechanism of albumin-induced tubulointerstitial inflammation and could provide a novel therapeutic target for limiting the progression of CKD.