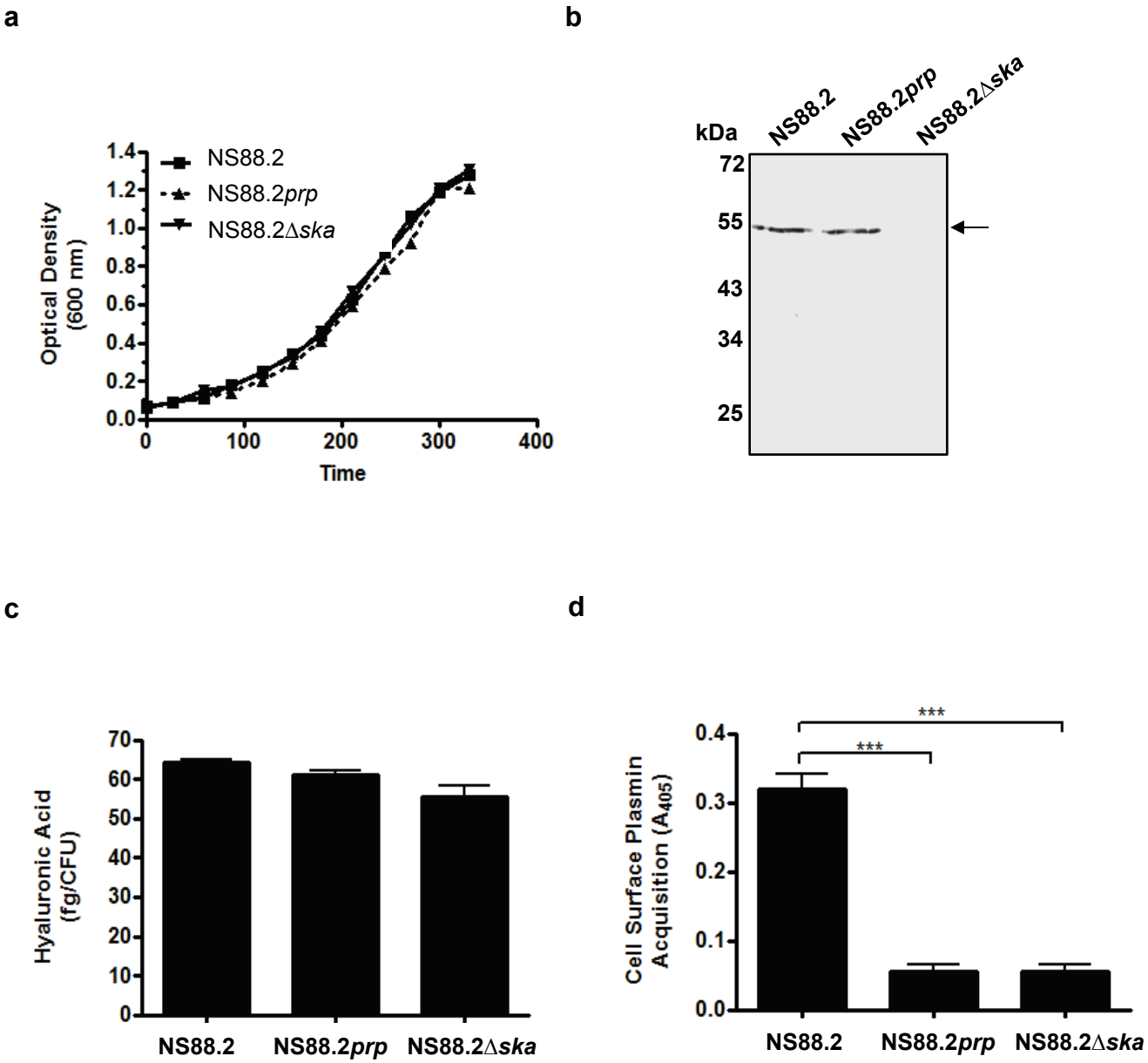
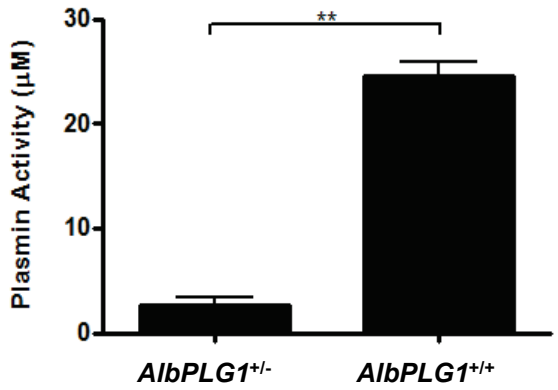
Fig. S1. *In vitro* characterisation of NS88.2, and the isogenic *prp* and *ska* deletion mutants. A. Growth of NS88.2, NS88.2*prp* and NS88.2Δ*ska*. **B.** Western blot analysis of streptokinase secreted into culture supernatants. An arrow indicates the major immunoreactive band. **C.** NS88.2, NS88.2*prp* and NS88.2Δ*ska* produce equivalent levels of hyaluronic acid capsule. **D.** GAS cell surface plasmin acquisition in culture supernatants with the addition of Glu-plasminogen. Data represents the mean ± standard error of two independent experiments performed in triplicate. Asterisks indicate statistical significance, $P < 0.001$ (***).

Fig. S2. Characterisation of homozygous humanized plasminogen mice. A. Streptokinase-mediated plasminogen activation and **B.** cell surface plasmin acquisition by NS88.2 in plasma collected from *AlbPLG*$^{+/-}$ (heterozygous; n = 1) and *AlbPLG1*$^{+/+}$ (homozygous; n = 2) mice. Streptokinase-mediated plasminogen activation data represent the mean ± standard deviation of duplicate assays. Cell surface plasmin acquisition data represent the mean ± standard error of two independent experiments performed in triplicate. Asterisks indicate statistical significance, $P < 0.001$ (***). **C.** Cohorts of 10 age and sex matched *AlbPLG1*$^{+/-}$ or *AlbPLG1*$^{+/+}$ mice were infected subcutaneously with NS88.2 and their survival monitored over a 10-day period.

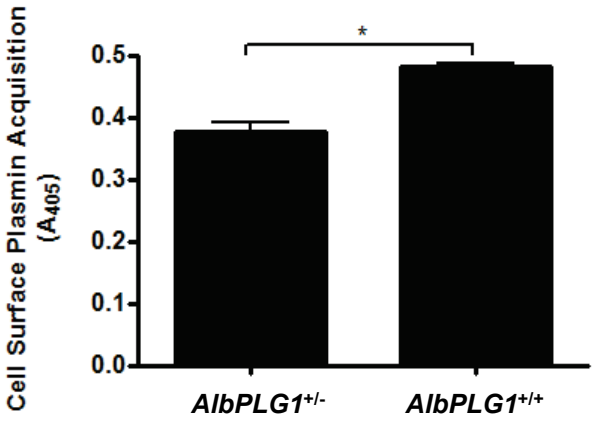
Supplementary Figure 1 Ly et al.



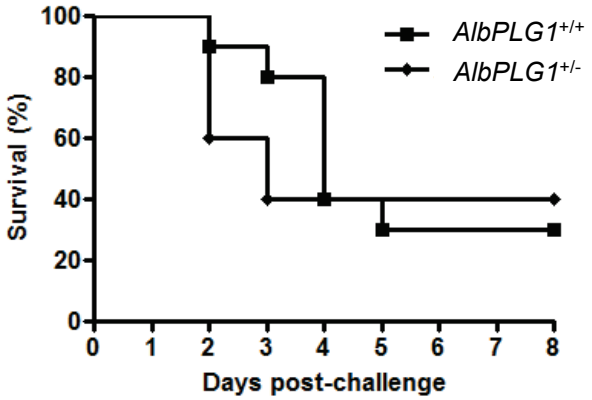
A


Plasmin Activity (µM)
30
20
10
0
**
AlbPLG1+/-
AlbPLG1+/+

B


Cell Surface Plasmin Acquisition (A405)
0.5
0.4
0.3
0.2
0.1
0.0
*
AlbPLG1+/-
AlbPLG1+/+

C


Survival (%)
100
80
60
40
20
0
0 1 2 3 4 5 6 7 8
Days post-challenge
AlbPLG1+/+
AlbPLG1+/-