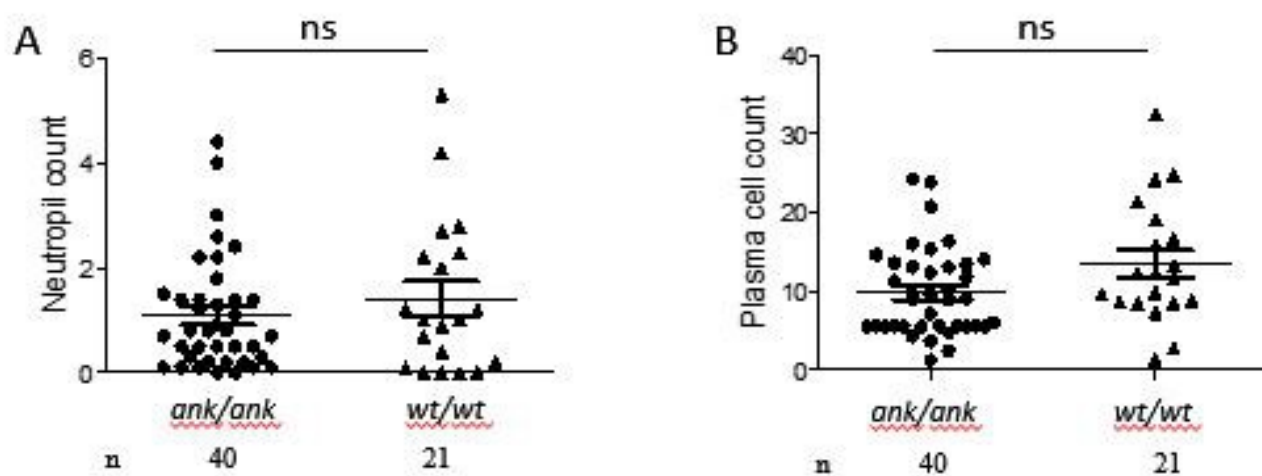
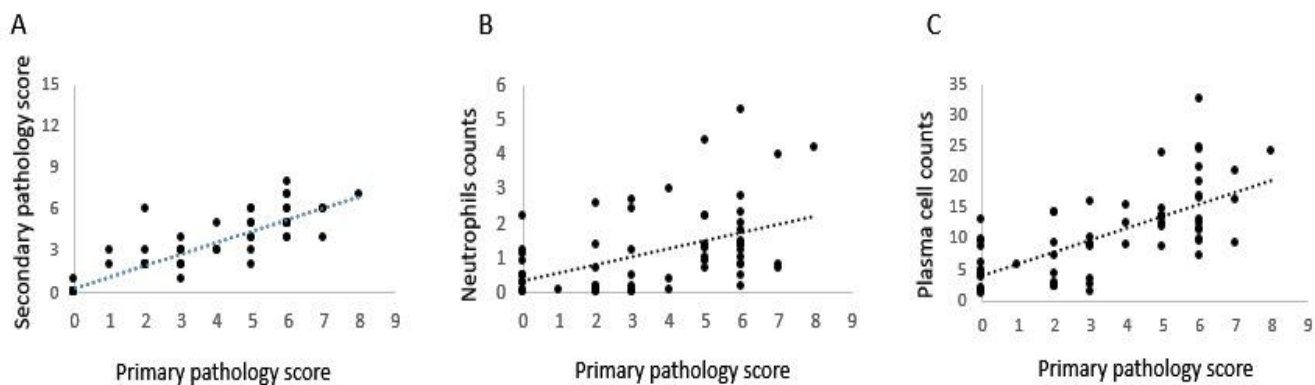


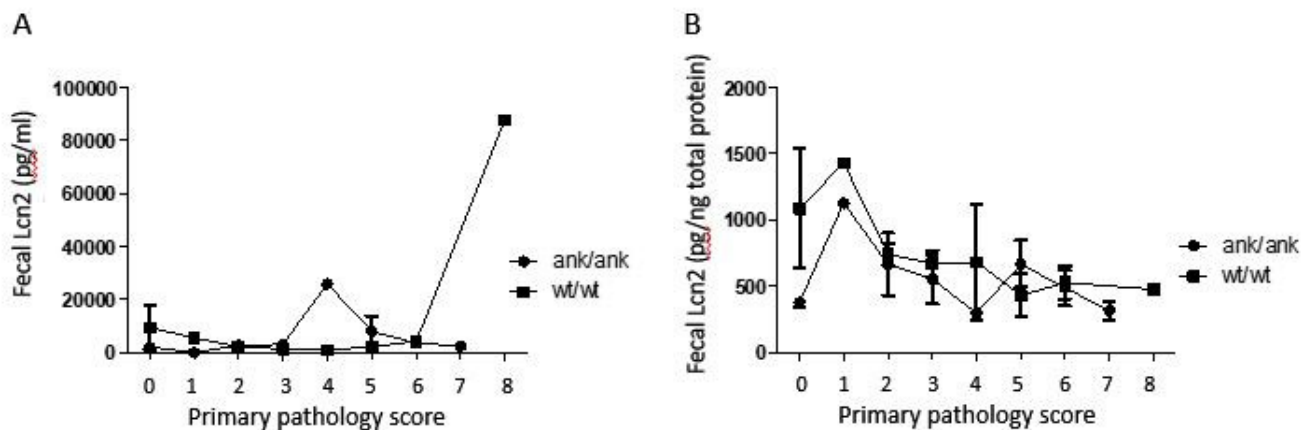
Supplementary Figure 1 Neutrophil and plasma cell counts in mice. Neutrophil count (A) and plasma cell count (B) were compared between *ank/ank* mice (n=40) versus C3FeB6-A/Aw-j *wt/wt* mice (n=21). Student's t-test was used.



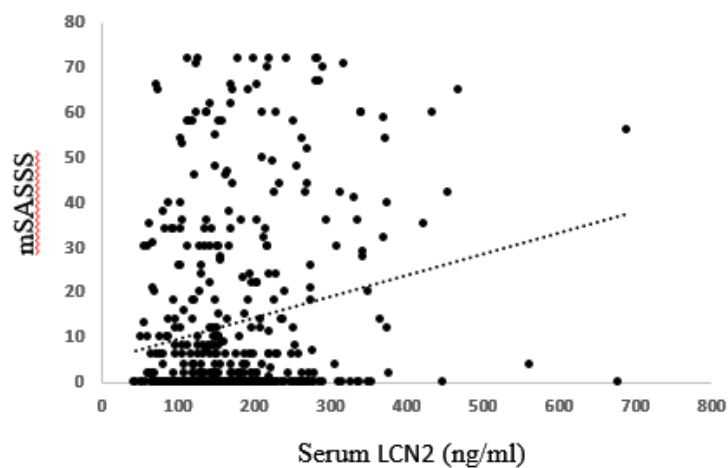
Supplementary Figure 2 Correlation of the primary and secondary pathology scoring systems. A. Correlation of primary and secondary pathology scores. B. Correlation of primary pathology scores and neutrophils counts. C. Correlation with primary pathology scores and plasma cell counts. Pearson's correlation coefficient test was used.



Supplementary Figure 3 Correlation of fecal Lcn2 levels and colon pathology in mice. A. Fecal levels of Lcn2 in *ank/ank* mice and C3FeB6-A/Aw-j *wt/wt* mice with different pathology scores. B. Fecal levels of Lcn2 vs. total protein in *ank/ank* mice and C3FeB6-A/Aw-j *wt/wt* mice with different pathology scores. Pearson's correlation coefficient test was used.



Supplementary Figure 4 Correlation of serum LCN2 levels and mSASSS in patients with AS only. Detection of serum LCN2 levels of different degrees of ankylosis (mSASSS) in AS patients. Pearson's correlation coefficient test was used.



Supplementary Table 1 Comparison of the severity of subclinical inflammation in *ank/ank* vs. C3FeB6-A/Aw-j *wt/wt* mice.

Genotype	n	Mucin Depletion (0-3)	Hyperplasia (0-3)	Number of foci (0-3)	Architectural distortion (0-3)	Granuloma (0-3)	Depth of inflammation (0-3)
ank/ank	40	0.03±0.03	0.8±0.2	1.0±0.1	0.03±0.03	0	1.0±0.1
C3FeB6-A/Aw-j <i>wt/wt</i>	21	0.3±0.1 **	1.1±0.2	1.3±0.2	0	0	1.2±0.2