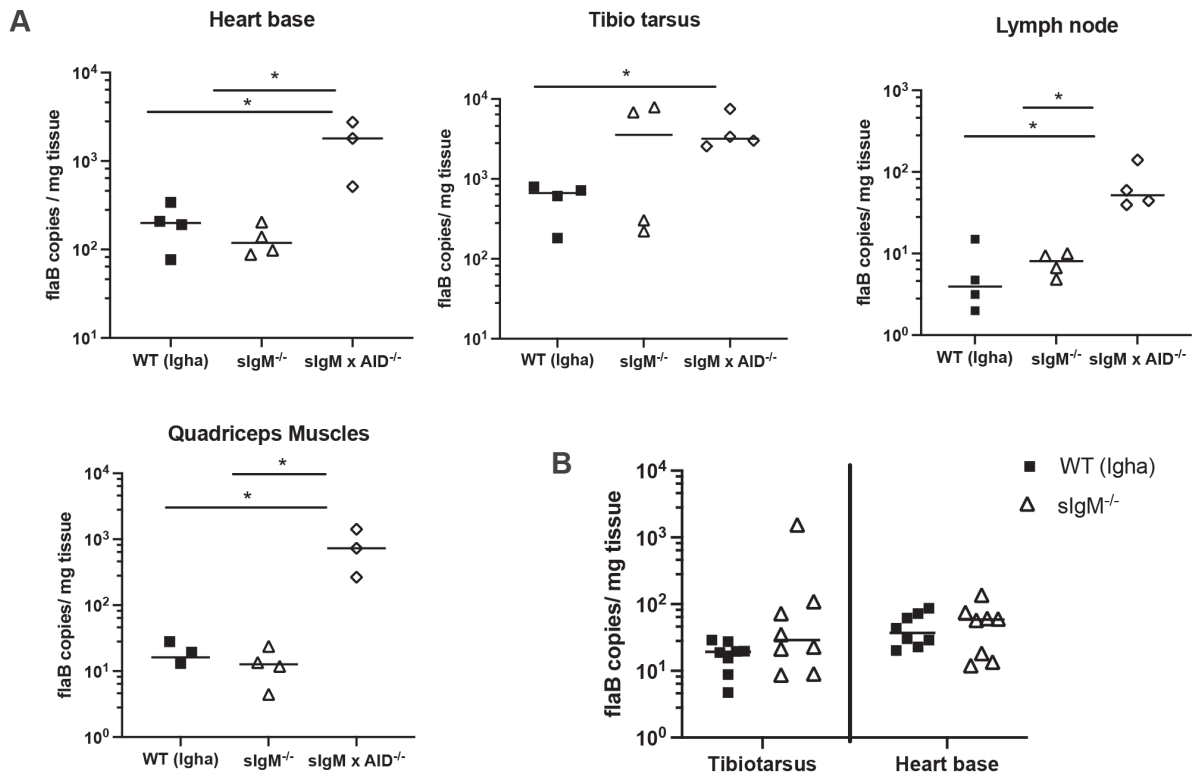


Suppl. Fig 1. Lack of secreted IgM results in reduced *Borrelia* specific IgG responses. (A) Shown are total (left), *Borrelia*-recombinant protein cocktail (Arp, BmpA, DbpA, and OspC) (middle), and *Borrelia*-lysate (right) specific serum IgG, (B) individual *Borrelia* recombinant proteins Arp, BmpA, DbpA, and OspC, shown are mean and SD of the group ($n = 7$) (C) IgA and (D) IgM at day 31 of infection. Shown are mean and SD of the group ($n = 4$). Significant statistical values as indicated using unpaired, two-tailed Student's t-test. * $p < 0.05$, ** $p < 0.01$. (E) Nitrocellulose strips containing *B. burgdorferi* cN40 proteins from whole cell lysate were blotted with immune sera collected at day 31 post infection from wild-type mice (lane 1), slgM^{-/-} mice (lanes 2 and 3), and serum from uninfected wild-type mice (lane 4) and probed with alkaline phosphatase-conjugated goat anti-mouse IgG. Numbers indicate molecular weights in thousands.



Suppl. Fig. 2. IgG but not IgM controls *Bb* tissue burden (A) *Bb* tissue burden on day 30 after *Bb* infection, as assessed by qPCR, measuring *flaB* DNA copy number in indicated tissues of C57BL/6 congenic *Igha*-expressing wild type controls (WT *Igha*, $n=4$), *slgM*^{-/-} mice ($n=4$) as well as Ig-deficient double knock out mice lacking *slgM* and the ability to undergo class-switch recombination due to a lack of *aicda* ($n=3$). (B) Shown are *Bb* tissue burden in WT *Igha* ($n=8$) and *slgM*-deficient mice ($n=8$) at day 120 after infection. Each symbol represents results from one mouse, horizontal bar indicates median for the group. * $p < 0.05$ by multiple unpaired Student's t-test.

Supplemental Table 1. Arthritis and carditis in day 121 infected WT and sIgM^{-/-} mice.

	Heart^b	R Knee	R Tibiotarsus
WT-1^a	(+)	-	-
WT-2	ND ^c	-	+
WT-3	(trace)	-	+/- ^d
sIgM^{-/-}-1	(+)	(trace) ⁺	(trace) ⁺
sIgM^{-/-}-2	(+)	(trace) ⁺	+
sIgM^{-/-}-3	ND	-	-

^a Groups of either wild-type (WT, C57BL/6) and sIgM^{-/-} mice (n=3) were infected with *Bb* for 121 days. Right legs and heart base were collected for arthritis and carditis assessment as described in Material and Methods.

^b Carditis in both groups was found to be chronic and inactive

^c ND, no data

^d Equivocal (not +)