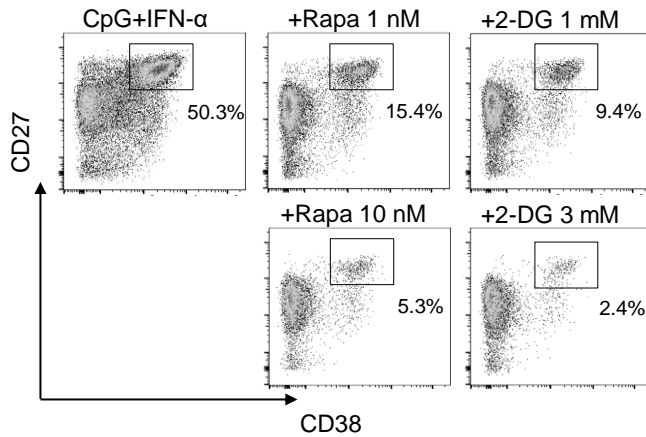
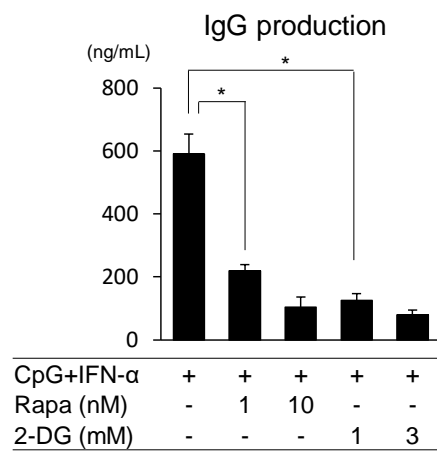


**Supplemental Figure 1. A-C**, CD27-IgD<sup>+</sup> naïve B cells, CD27<sup>+</sup>IgD<sup>+</sup> unswitched memory B cells, and CD27<sup>+</sup>IgD<sup>-</sup> class-switched memory B cells were cultured alone or with CpG and/or for 3 or 5 days. Ki-67 expression in each of the three B cell subsets was analyzed on day 3 by flow cytometry. **A**, Representative histograms and **B**, a bar chart of MFI. **C**, The proportion of living cell was calculated using propidium iodide staining on day 5. **D**, CD27<sup>+</sup>IgD<sup>+</sup> unswitched memory B cells were stimulated with loxoribine and IFN-α for 5 days. Dot plots are representative of three independent experiments that yielded the same results. Data are mean ± SEM of three independent experiments using cells from three different donors. \* p<0.05, \*\* p<0.01. LOX, loxoribine.

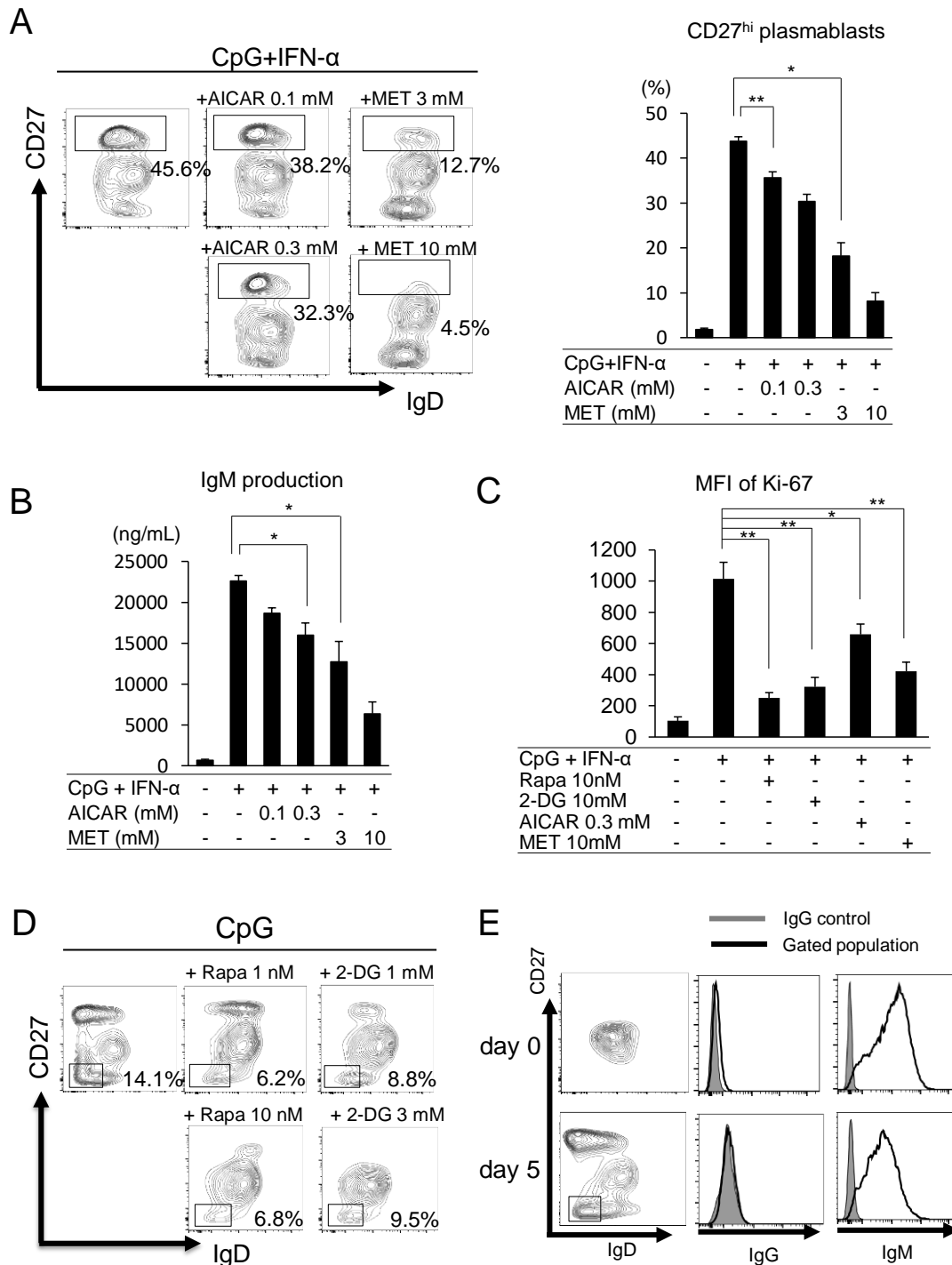
## A Class-switched memory B cells



## B



**Supplemental Figure 2.** Rapamycin and 2-DG efficiently suppressed plasmablast differentiation and immunoglobulin production from activated class-switched memory B cells. Class-switched memory B cells were pretreated with rapamycin or 2-DG and stimulated with CpG+IFN- $\alpha$  for 5 days. **A**, Plasmablast differentiation was analyzed by flow cytometry. **B**, IgG production was measured by ELISA. Dot plots are representative of three independent experiments that yielded the same results. Data are mean  $\pm$  SEM of three experiments using cells from three different donors. \* $p$ <0.05, \*\* $p$ <0.01. Rapa, rapamycin.



**Supplemental Figure 3. A and B**, CD27<sup>+</sup>IgD<sup>+</sup> unswitched memory B cells were pretreated with AICAR or metformin and stimulated for 5 days. **A**, Proportion of CD27<sup>hi</sup> plasmablasts, **B**, IgM production. **C**, CD27<sup>+</sup>IgD<sup>+</sup> unswitched memory B cells were pretreated with rapamycin, 2-DG, AICAR and metformin, and stimulated with CpG for 3 days. Expression of Ki-67 was evaluated by flow cytometry. **D**, Proportion of CD27<sup>-</sup>IgD<sup>-</sup> B cells. Unswitched memory B cells were pretreated with rapamycin or 2-DG and stimulated with CpG for 5 days. **E**, Expression of membrane IgG and IgM on unswitched memory B cells on day 0 (upper panels), and on CpG-induced CD27<sup>-</sup>IgD<sup>-</sup> B cells on day 5. Contour plots are representative of three independent experiments that yielded the same results. Data are mean  $\pm$  SEM of three experiments using cells from three different donors. \* $p$ <0.05, \*\* $p$ <0.01. MET, metformin.