

Table 1. Medications taken at first visit do not correlate with ARID3a expression.

SLE Patient Phenotype*	Hydroxychloroquine	Depomedrol	Prednisone	Azathioprine	Mycopheolate Mofetil	Belimumab	Methotrexate
ARID3a ^N (23)	15 (65%)	7 (30%)	10 (43%)	2 (9%)	8 (35%)	1 (4%)	0 (0%)
ARID3a ^H (17)	14 (82%)	5 (29%)	6 (35%)	5 (29%)	6 (35%)	0 (0%)	4 (24%)

*Four patients were taking no immunomodulatory medications.

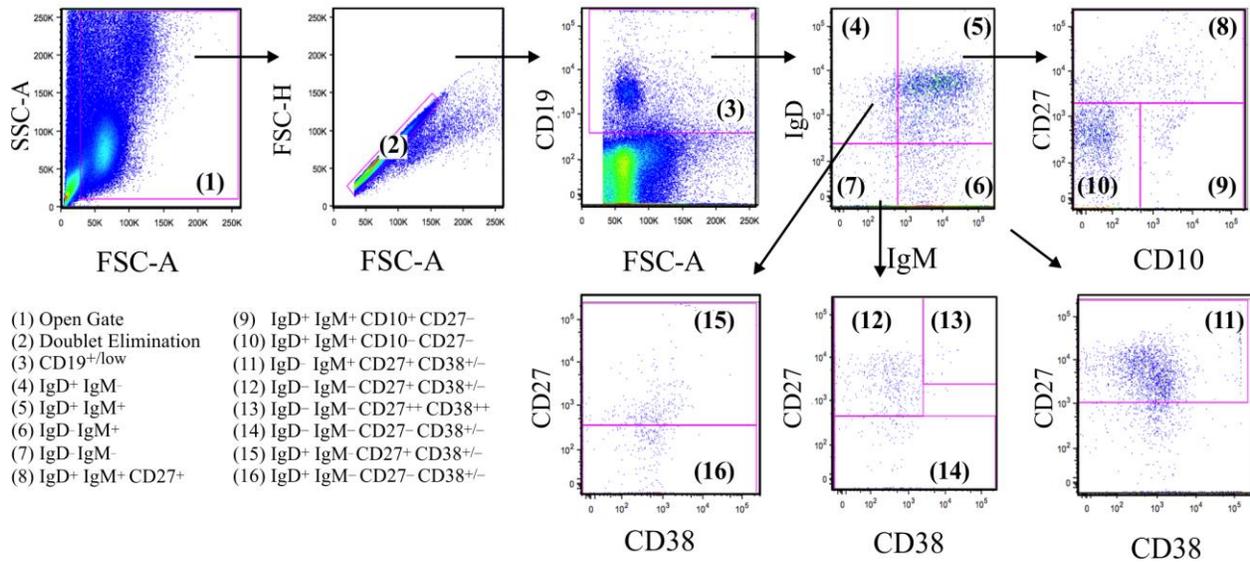


Figure 1. Immunofluorescent gating of peripheral blood B lineage subpopulations. Representative data show surface markers and flow cytometric-gating strategies used to identify individual B lymphocyte subsets. Numbers correspond to common nomenclature for CD19⁺ B cell subsets defined as: naive IgD⁺ (IgD⁺IgM⁻CD27⁻), IgD⁺IgM⁺CD27⁺, naive (IgD⁺IgM⁺CD27⁻CD38^{+/-}), IgD⁺IgM⁺CD27⁺CD38^{+/-}, IgD⁻IgM⁺CD27⁺, class-switched memory (IgD⁻IgM⁺CD27⁺CD38^{+/-}), double negative (DN) cells (IgD⁻IgM⁻CD27⁻CD38^{+/-}), and CD19^{low/+} plasmablast/plasma cells (IgD⁻IgM⁺CD27⁺⁺CD38⁺⁺).

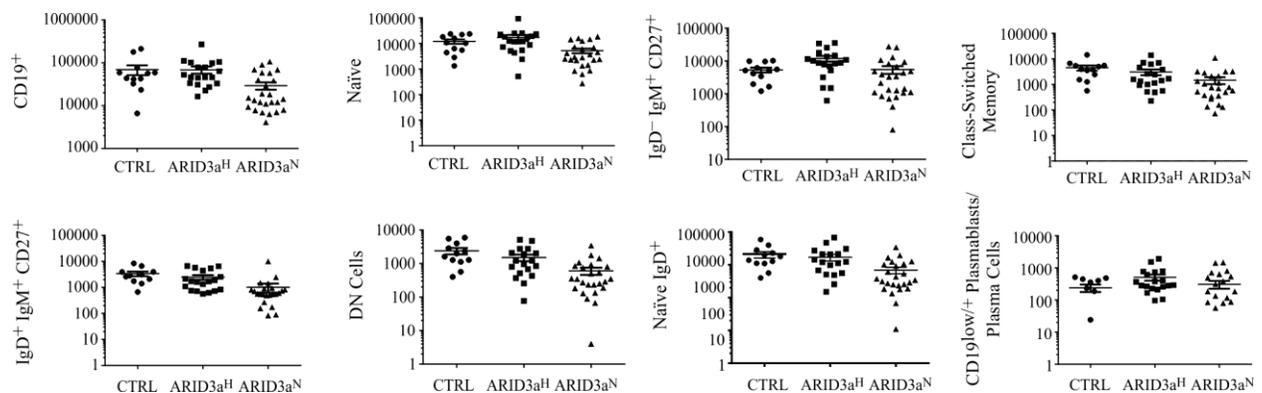


Figure 2. Increased numbers of ARID3a⁺ cells are not due to expansions of specific B cell subsets. CD19⁺ B cells from healthy control, ARID3a^H and ARID3a^N patient samples were stained and B cell subsets were gated as shown in Figure S1. Each symbol represents one sample. Samples with <1000 total B cells/ml were excluded because B cell subsets numbers were too few for valid enumeration. Means \pm SEM are shown. Zero values were included in analyses. Mann-Whitney analyses showed increased ARID3a^H memory IgM cells versus controls ($p=0.0428$).

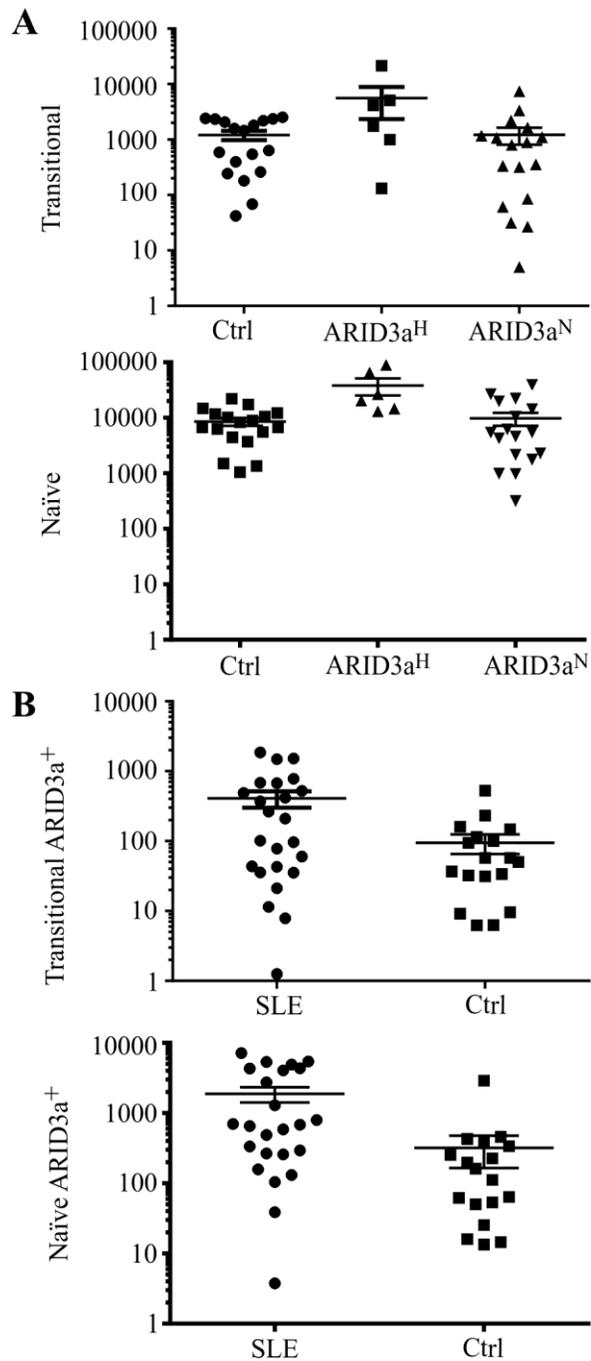


Figure 3. Transitional B cells did not account for increased numbers of ARID3a⁺ B cells. Quantification of transitional (CD10⁺) and naive (CD10⁻) B cells (A) and numbers of ARID3a⁺ cells (B) within those subsets were determined in peripheral blood of healthy controls, ARID3a^H patients, and ARID3a^N patients by flow cytometry. Each symbol represents a different sample. Means and SEMs are indicated.

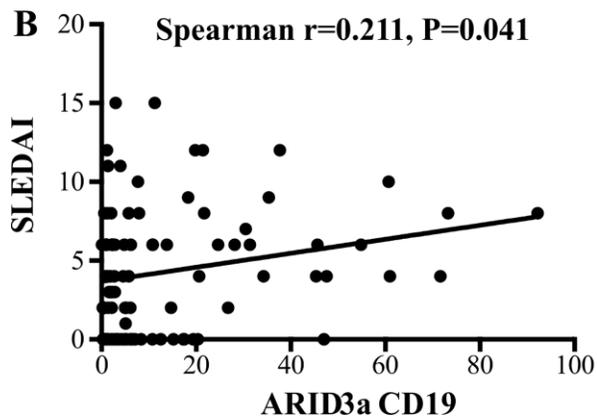
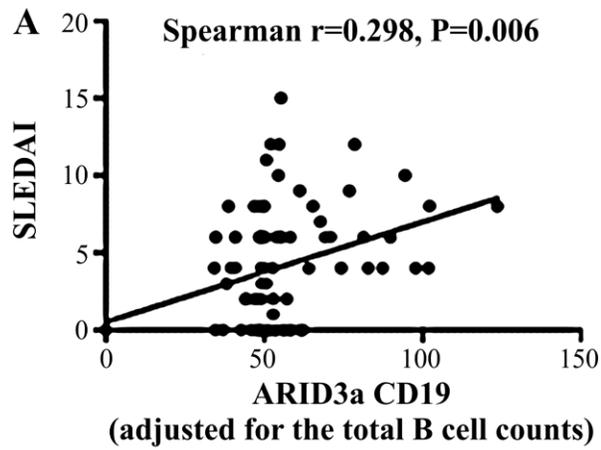


Figure 4. Increased SLEDAI scores are correlated with numbers of ARID3a⁺ CD19⁺ B cells. Spearman's rank correlation coefficient and corresponding p value was calculated to determine a relationship between total numbers of ARID3a⁺ CD19⁺ B cells from each patient at each visit, and the corresponding SLEDAI scores at the respective visits. (A) Numbers of ARID3a⁺CD19⁺ B cells were adjusted for total B cell counts of each patient sample. (B) Unadjusted data. Correlation coefficients and p values are shown.

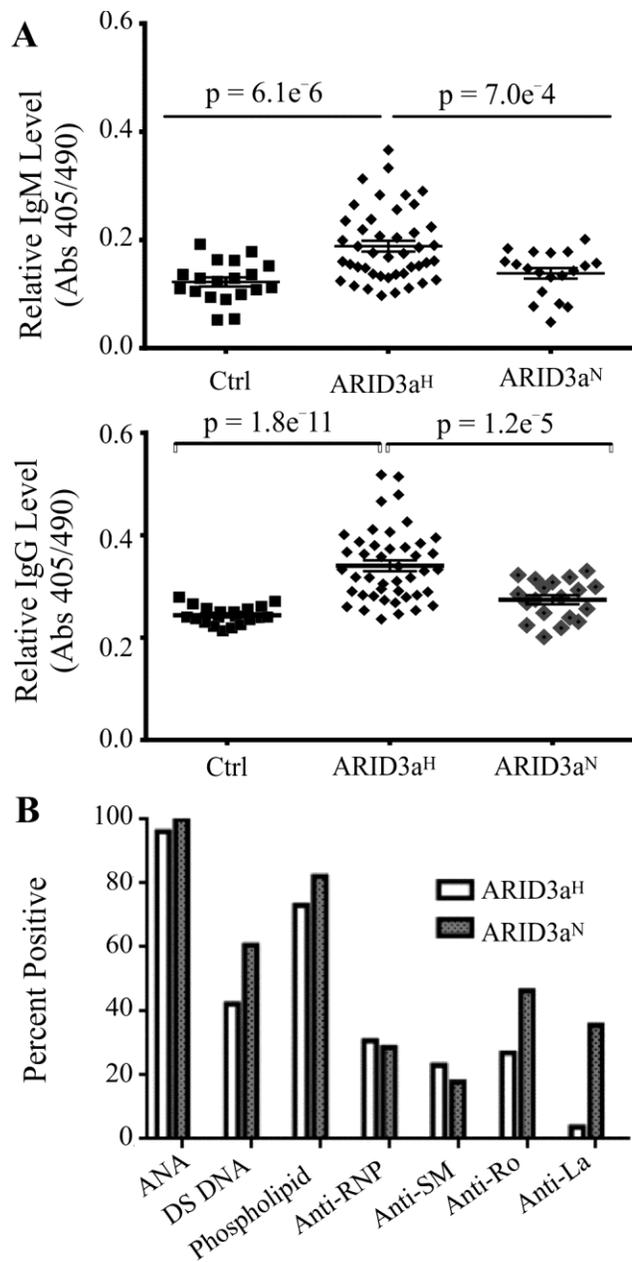


Figure 5. Plasma immunoglobulin levels are higher in ARID3a^H SLE samples, but all samples had similar autoreactivities. (A) Relative plasma IgM and IgG from control (n=19), ARID3a^H (n=44) and ARID3a^N (n=19) samples are shown as averages of duplicates. Each symbol represents one sample. Error bars indicate mean \pm SEM. P values were determined by Student's t-test. (B) Antibody reactivities for common self-antigens were determined and percent positive samples for 16 ARID3a^H and 26 ARID3a^N samples are presented.