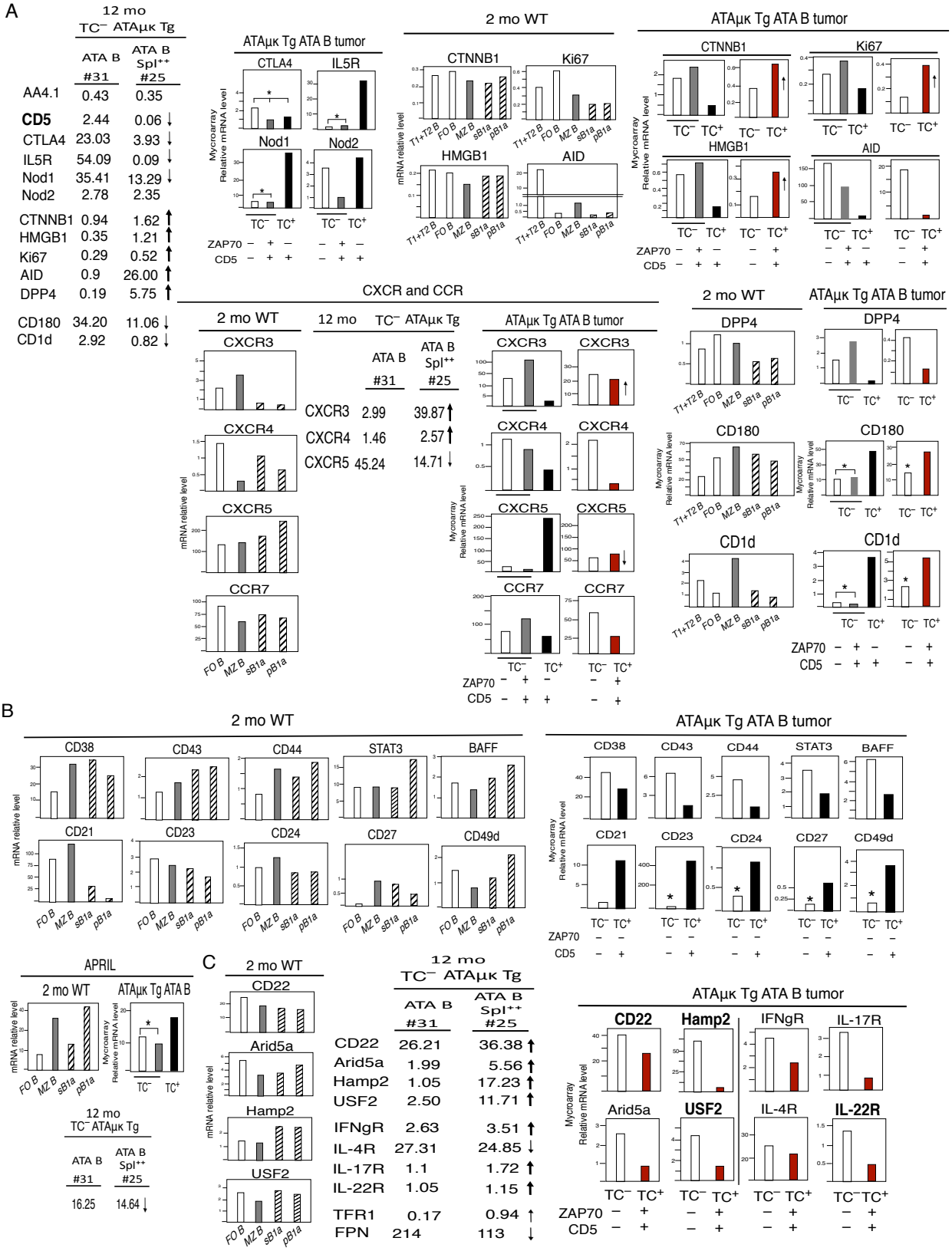
A
12 mo TC⁻ ATAμκ Tg
ATA B #31
ATA B Spl++ #25
AA4.1 0.43 0.35
CD5 2.44 0.06 ↓
CTLA4 23.03 3.93 ↓
IL5R 54.09 0.09 ↓
Nod1 35.41 13.29 ↓
Nod2 2.78 2.35
CTNNB1 0.94 1.62 ↑
HMGB1 0.35 1.21 ↑
Ki67 0.29 0.52 ↑
AID 0.9 26.00 ↑
DPP4 0.19 5.75 ↑
CD180 34.20 11.06 ↓
CD1d 2.92 0.82 ↓
ATAμκ Tg ATA B tumor
2 mo WT
CTLA4
IL5R
Nod1
Nod2
CTNNB1
Ki67
HMGB1
AID
Mycroarray Relative mRNA level
mRNA relative level
T1+T2 B
FO B
MZ B
sB1a
pB1a
TC⁻ TC+
ZAP70 – + – – + –
CD5 – + + – + +
CXCR and CCR
CXCR3
CXCR4
CXCR5
CCR7
12 mo TC⁻ ATAμκ Tg
CXCR3 2.99 39.87 ↑
CXCR4 1.46 2.57 ↑
CXCR5 45.24 14.71 ↓
DPP4
CD180
CD1d
B
CD38
CD43
CD44
STAT3
BAFF
CD21
CD23
CD24
CD27
CD49d
APRIL
12 mo TC⁻ ATAμκ Tg
16.25 14.64 ↓
C
CD22
Arid5a
Hamp2
USF2
CD22 26.21 36.38 ↑
Arid5a 1.99 5.56 ↑
Hamp2 1.05 17.23 ↑
USF2 2.50 11.71 ↑
IFNgR 2.63 3.51 ↑
IL-4R 27.31 24.85 ↓
IL-17R 1.1 1.72 ↑
IL-22R 1.05 1.15 ↑
TFR1 0.17 0.94 ↑
FPN 214 113 ↓
IFNgR
IL-17R
IL-4R
IL-22R

Figure S2

Figure S2. 2 mo wild time (WT) B1a cells versus ATAμκ Tg ATA B tumor.
2 mo WT B cells: spleen-immature B (T1+T2 B), FO B, MZ B, and spleen B1a (sB1a,) and PerC B1a (pB1a) in mRNA. ATA B tumor for mycloarray analysis mRNA: as listed Figure 4A, $TC^{-}ZAP70^{-}CD5^{-}$ (16 mo) and $TC^{-}ZAP70^{+}CD5^{+}$ (22 mo), versis middle aged ATA B tumor $TC^{+}ZAP70^{-}CD5^{+}$ (10 mo). Figure 4B, $TC^{-}ZAP70^{-}CD5^{-}$ (17 mo) versus $TC^{+}ZAP70^{+}CD5^{+}$ (15 mo). As in Figure 5A, 12 mo TC^{-}ATAμκTg mice ATA B with normal $CD5^{+}$B #31, and $CD5^{-}$B with spleen increased #25. **(A)** 12 mo ATA B for TC^{-} cells, $CD5^{+}$ #31 showed slightly AA4.1 (immature) present, however most mature B1a, and #25 is the mature $CD5^{-}$ B cell with Spl^{++}. This 12 mo $CD5^{-}$ ATA B cell is similar to old aged TC^{-}ATA B tumors, down IL5R and Nod1, increase CTNNB1, HMGB1, Ki67, AID and DPP4, down CD180 and CD1d, as TC^{-} compared to middle aged $TC^{+}ZAP70^{-}CD5^{+}$. However, both TC^{-} and $TC^{+}ZAP70^{-}$ cells are CTLA4 down. Nod2 is $TC^{-}ZAP70^{+}CD5^{+}$ cells are down. CTNNB1, HMGB1, Ki67 are higher in $TC^{-}ZAP70^{+}CD5^{+}$ than $TC^{-}ZAP70^{-}CD5^{-}$ and similar to high $TC^{+}ZAP^{+}CD5^{+}$. AID was originally (in 2 mo) all mature B cells were low, then, old aged $TC^{-}ZAP^{-}CD5^{-}$ATA B tumor more increased than $TC^{-}ZAP70^{+}CD5^{+}$ cells and TC^{+} cells are negative. Down: **For CXCR**. CXCR5 was originally high in B1a cells, then, 12 mo $CD5^{-}$ spl^{++} cell showed down CXCR5, then CXCR4 and CXCR3 increased as old aged TC^{-}ATA B tumor. $TC^{+}ZAP70^{-}CD5^{+}$ cells are continuously $CXCR5^{+}$ and low CXCR4 and CXCR3. $TC^{+}ZAP70^{+}CD5^{+}$ cells are lower CXCR5 but low CXCR4 and slightly increased CXCR3. CCR7 is slightly higher by old aged TC^{-} cells than TC^{+}. **(B)** 2 mo WT B cells compared with $TC^{-}ZAP70^{-}CD5^{-}$ versus $TC^{+}ZAP70^{-}CD5^{+}$ in listed Figure 4A1,3. 2 mo WT CD38, CD43, CD44, STAT3, BAFF are higher in pB1a, and old age TC^{-}ATA B are more increased than middle aged TC^{+}, but $TC^{+}ZAP70^{+}CD5^{+}$ increased for CD44 and STAT3 (Figure 4B2). TC^{+} in CD21, CD23. CD24, CD27, CD49d are higher than TC^{-}. In 2 mo WT B1a cells, CD21 negative and CD23 low originally, and low in TC^{-} and $TC^{+}ZAP70^{+}CD5^{+}$ also low. CD49d showed higher in original pB1a, then all CD24, CD27, CD49d were low in old aged TC^{-}ATA B tumor (both $ZAP70^{-}$ and $ZAP70^{+}$) than TC^{+}. Since CD27 is generally lower in all B cells in mice (not human) TC^{+}Tg slightly increased. CD49d and CD24 down are old aged TC^{-}ATA B tumor. In APRIL, 2 mo WT showed higher in pB1a and $TC^{-}CD5^{-}$showed decreased at 12 mo and also low in old aged TC^{-}ATA B tumor, compared to increased BAFF. **(C)** 2 mo WT, CD22 and Arid5a are FOB > B1a, and Hamp2 are FOB < B1a. Then, 12 mo $TC^{-}CD5^{-}$ cells showed similar to old aged TC^{-} ATA B tumor than middle aged $TC^{+}ZAP70^{-}CD5^{+}$ cells (Figure 5C) and also $TC^{+}ZAP70^{+}CD5^{+}$ cells. Clearly, high CD22R and Arid5a, and higher Hamp2, $USF2^{+}$, and $IL\text{-}22R^{+}$ in TC^{-} than TC^{+}($ZAP70^{-}$ and $ZAP70^{+}$). Thus, not Hamp2 increased in TC^{+}Tg mice.