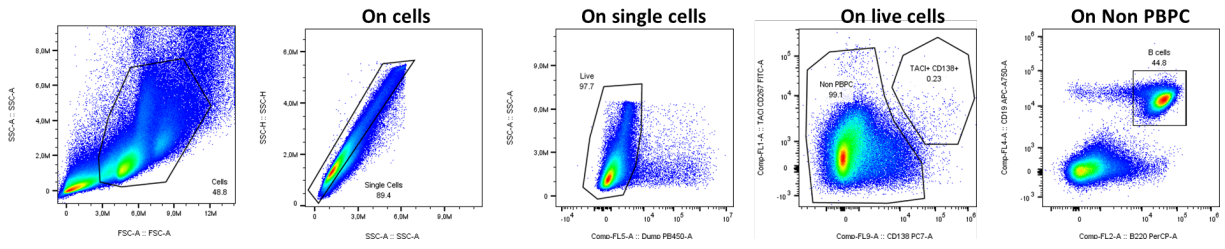
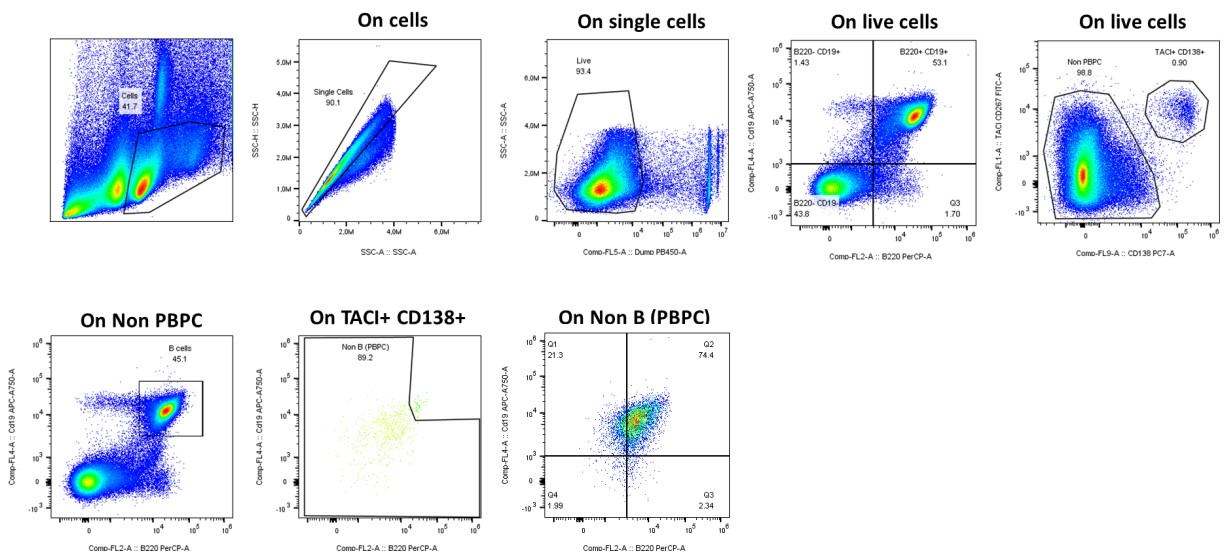


Supplementary Figure 1, Part 1

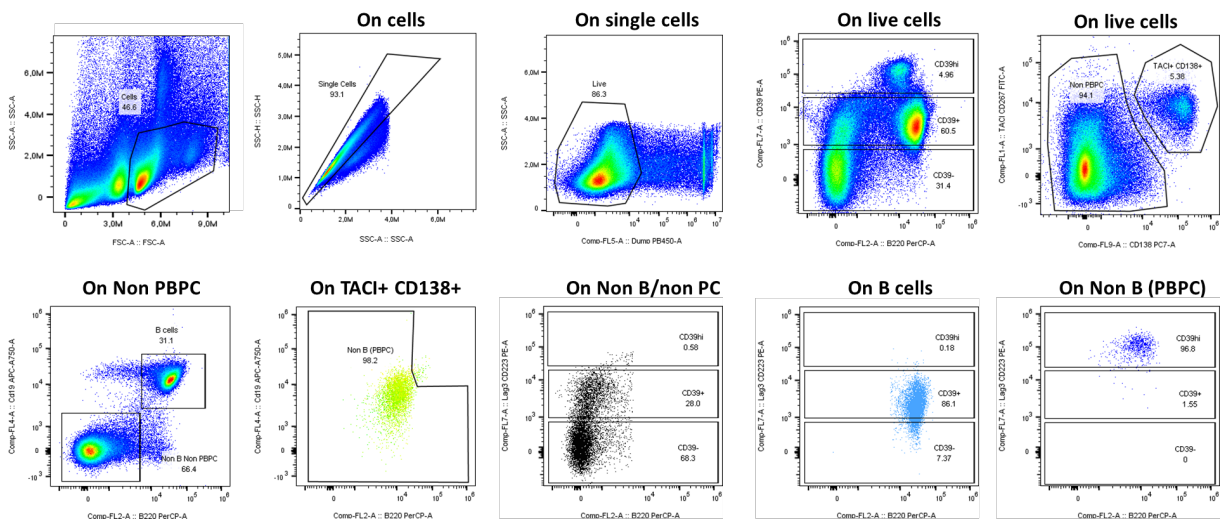
A Gating strategy on blood samples



B Gating strategy on splenocytes: panel PB, early PC and late PC

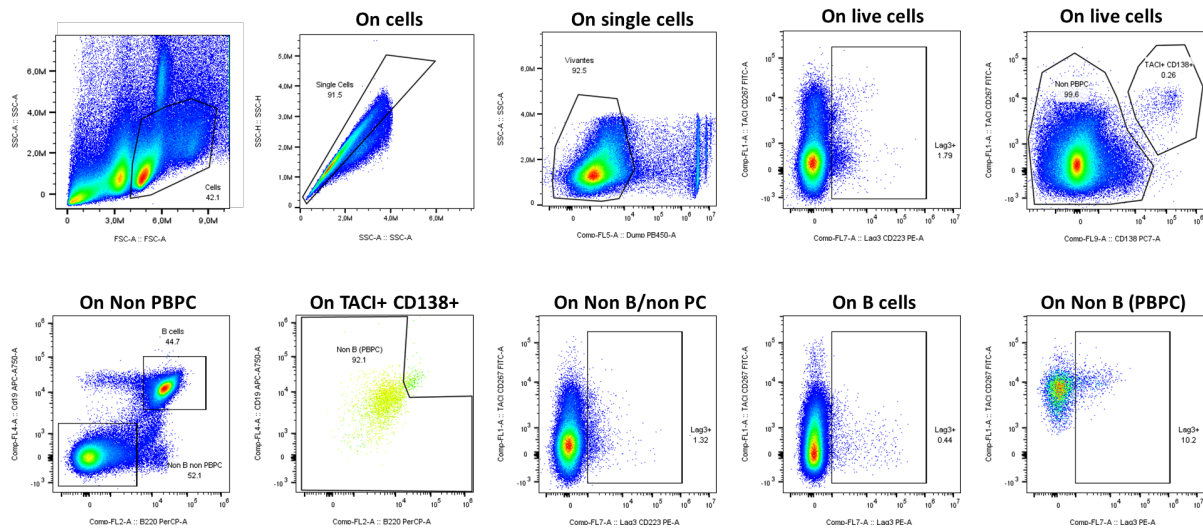


C Gating strategy on splenocytes: panel CD39

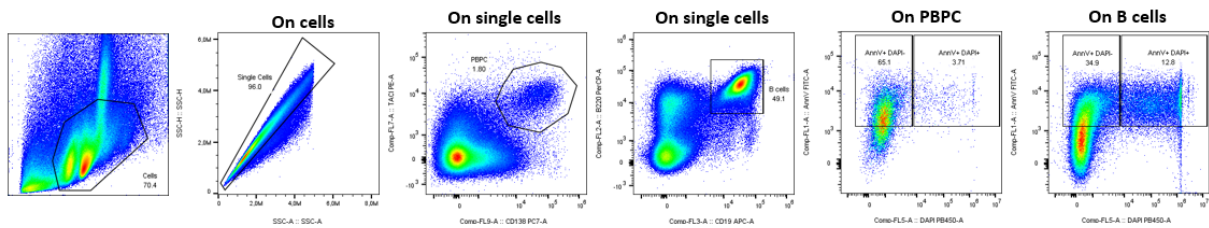


Supplementary Figure 1, Part 2

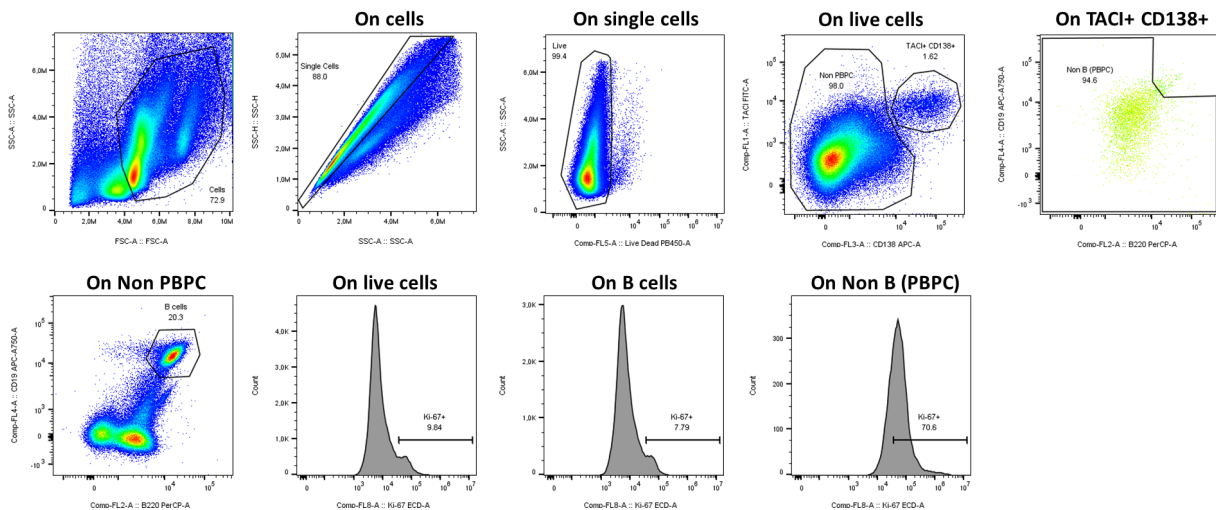
D Gating strategy on splenocytes: panel LAG3



E Gating strategy on splenocytes: panel DAPI/Annexin V



F Gating strategy on splenocytes: panel Ki-67



Supplementary Figure 1. Gating strategies for cytometry analysis.

(A) Dot plots represent the gating strategy to analyze blood samples. Single cells were gated on cells, live cells on single cells, Non PBPC and TACI⁺ CD138⁺ on Live cells and B cells on Non PBPC cells.

(B) Dot plots represent the gating strategy to analyze PB (B220⁺ CD19⁺), Early PC (B220^{lo} CD19⁺) and Late PC (B220^{lo} CD19^{lo}) according to *Pracht et al.* The same gating as above was used to select Non PBPC, TACI⁺ CD138⁺ and B cells. On TACI⁺ CD138⁺ cells we excluded TACI^{lo} cells (color depend on the expression of TACI with green cells which are TACI^{lo}) to obtain Non-B (PBPC) cells. The gates B220⁺ CD19⁺, B220⁺ CD19⁻, B220⁻ CD19⁻ and B220⁻ CD19⁺ were placed on live cells and this gating was applied on Non-B (PBPC) cells.

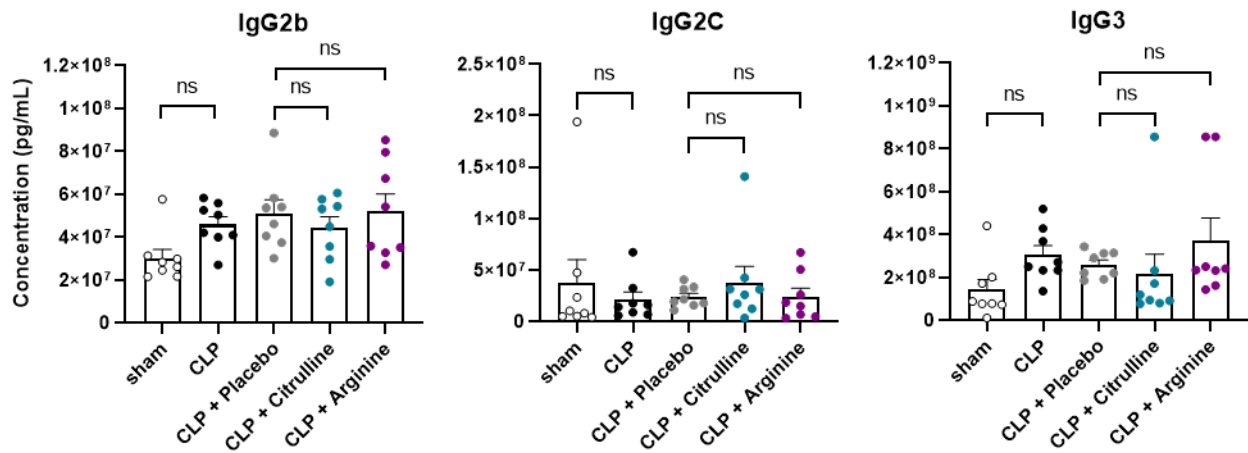
(C) Dot plots represent the gating strategy to analyze CD39 expression on PBPC and B cells. We used the same gating to select Non PBPC cells, TACI⁺ CD138⁺ cells, B cells, Non-B / Non PBPC cells and Non-B (PBPC) cells. CD39⁻, CD39⁺ and CD39^{hi} gates were placed on live cells and this gating strategy was applied on Non-B / non PBPC (black), on B cells (light blue) and on Non-B (PBPC) (dark blue) cells.

(D) Dot plots represent the gating strategy to analyze LAG3 expression on PBPC and B cells. We used the same gating to select Non PBPC cells, TACI⁺ CD138⁺ cells, B cells, Non-B / Non PBPC cells and Non-B (PBPC) cells. LAG3⁺ cells were gated on live cells and this gating strategy was applied on Non-B/non PBPC, on B cells and on Non-B (PBPC) cells.

(E) Gating strategy used to analyze cell death and cell apoptosis. We gated PBPC (TACI⁺ CD138⁺) and B cells (CD19⁺ B220⁺) on single cells. Apoptotic cells (AnnexinV⁺ DAPI⁻) and dead cells (AnnexinV⁺ DAPI⁺) were analyzed on PBPC and on B cells.

(F) Dot plots represent the gating strategy to analyze cell proliferation with the Ki-67 marker. We used the same gating to select Non PBPC cells, TACI⁺ CD138⁺ cells, B cells, and Non-B (PBPC) cells. Histograms represent the percentage of Ki-67⁺ cells on live cells (left), B cells (middle) and Non-B (PBPC) cells (right).

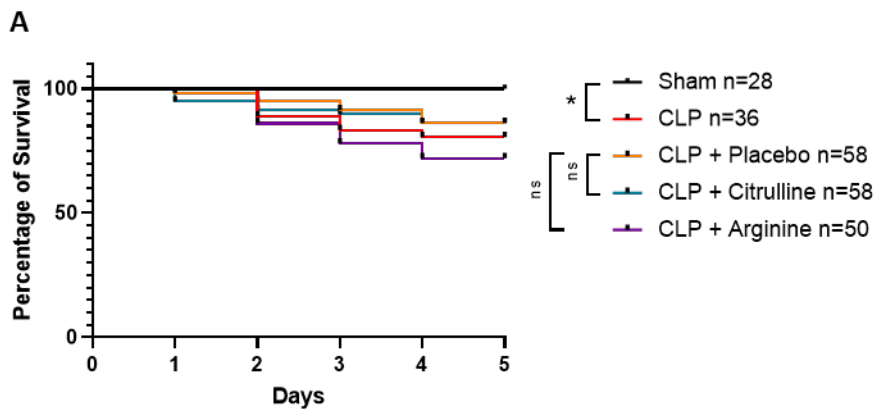
Supplementary Figure 2.



Supplementary Figure 2. Impact of citrulline on IgG concentrations

Histograms represent IgG2b, IgG2c and IgG3 concentrations (pg/mL) measured in the plasma of the indicated group of mice. n = 8 mice per groups. Kuskal-Wallis test, ns: non-significant.

Supplementary Figure 3.



Supplementary Figure 3. Impact of citrulline on survival. Survival curves representing the percentage of survival mice per groups. Sham, n=28 ; CLP, n=36 ; CLP + Placebo, n=58 ; CLP + Citrulline, n=58 ; CLP + Arginine, n=50. Log-rank test, * p<0,05, ns: non-significant.

Supplementary Tables

Supplementary Table 1. Antibodies for flow cytometry analysis

Antibodies	Fluorochromes	Clones	References	Purchases
TACI (CD267)	PE	REA1227	130-124-100	Miltenyi
TACI (CD267)	Vio-Bright B515	REA1227	130-124-103	Miltenyi
B220 (CD45R)	PerCP-Vio700	REA755	130-110-850	Miltenyi
CD138	PE-Vio770	REA104	130-102-318	Miltenyi
CD138	APC	REA104	130-122-945	Miltenyi
CD19	APC	REA749	130-112-036	Miltenyi
CD19	APC-Vio770	REA749	130-112-038	Miltenyi
Ki-67	PE-Vio615	REA183	130-120-558	Miltenyi
CD39	PE	REA870	130-114-357	Miltenyi
Lag3 (CD223)	PE	C9B7W	12-2231-83	eBioscience

Supplementary Table 2: Antibodies for immunofluorescence staining

Antibodies	Clones	Isotype / species	Purchases	References	Dilutions
CD3	SP7	Polyclonal / Rabbit	DAKO (Agilent)	A045201-2	1/1000
Ki-67	SP6	IgG / Rabbit	Novus Biologicals	NB600-1252	1/400
B220	RA3-6B2	IgG2a / Rat	BD Biosciences	553084	1/2000
CD138	281-2	IgG2a / Rat	BD Biosciences	553713	1/10000
IgM	II/41	IgG2a / Rat	eBioscience	41-5790-82	1/400
DAPI	/	/	Immunochemistry	6244	1/500

Supplementary Table 3: TaqMan primers for gene expression studies

genes	probes	Purchases	References
<i>B2m</i>	FAM-MGB	ThermoFischer Scientific	Mm01179194_m1
<i>Il10</i>	FAM-MGB	ThermoFischer Scientific	Mm01288386_m1
<i>Mki67</i>	FAM-MGB	ThermoFischer Scientific	Mm01278617_m1
<i>Irf4</i>	FAM-MGB	ThermoFischer Scientific	Mm00516431_m1
<i>Myc</i>	FAM-MGB	ThermoFischer Scientific	Mm00487804_m1
<i>Cdc25a</i>	FAM-MGB	ThermoFischer Scientific	Mm00483162_m1
<i>Ccnd2</i>	FAM-MGB	ThermoFischer Scientific	Mm00438070_m1
<i>Ccr7</i>	FAM-MGB	ThermoFischer Scientific	Mm99999130_s1