

Table S1. Antibodies and immunostaining panels used for flow cytometry.

Immunostaining Panel	Antibody	Fluorochrome	Clone	Manufacturer
Surface Panel 1	CD19	AF700	HIB19	BioLegend
	CD27	BV421	O323	BioLegend
	CD38	PE-Cy7	HIT2	BioLegend
	CD24	FITC	ML5	BioLegend
	IgD	PerCP-Cy5.5	IA6-2	BD Biosciences
	IgM	APC	MHM-88	BioLegend
	IL-21R	PE	2G1-K12	BioLegend
Surface Panel 2	CD19	AF700	HIB19	BioLegend
	CD27	BV421	O323	BioLegend
	CD38	PE-Cy7	HIT2	BioLegend
	CD24	FITC	ML5	BioLegend
	CD5	PE	UCHT2	BioLegend
	CD25*	APC	M- A251+2A3	BD Biosciences
	Intracellular Panel 1	CD19	AF700	HIB19
CD27		BV421	O323	BioLegend
CD38		PE-Cy7	HIT2	BioLegend
CD24		FITC	ML5	BioLegend
IgM		APC	MHM-88	BioLegend
IL-10 (IC)		PE	JES3-19F1	BioLegend
Viability Dye		eFluor780	-	eBioscience

Anti-human monoclonal antibodies used for the B-cell immunophenotyping. *2 clones of anti-CD25 that bind to different epitopes were used simultaneously to enhance CD25 staining. IC, Isotype control.

Table S2. Reproducibility of the assessed B-cell subsets

Phenotype	Delineation markers	N	ρ
Total CD19 ⁺ B cells	CD19 ⁺	18	0.778
Naïve B cells	CD19 ⁺ CD27 ⁻	18	0.995
Memory B cells	CD19 ⁺ CD27 ⁺	18	0.999
Anergic B cells	CD19 ⁺ CD27 ⁻ IgD ⁺ IgM ⁻	18	0.359
Transitional B cells	CD19 ⁺ CD27 ⁻ CD24 ^{hi} CD38 ^{hi}	18	0.963
Marginal zone B cells	CD19 ⁺ CD27 ⁺ IgD ⁺ IgM ⁺	18	0.925
CD5 ⁺ B cells	CD19 ⁺ CD5 ⁺	N/A	N/A

Reproducibility of the assessed B-cell phenotypes was determined by comparing repeated measurements from 18 donors performed between 1-2 months after the original measurement. ρ , correlation coefficient; N/A, not available.

Table S3. Association of the B-cell phenotypes with duration of disease.

Phenotype	N	P value	β (95% CI)
<i>B cell subsets</i>			
Total CD19 ⁺ B cells	43	0.812	0.002 (-0.019 / 0.023)
Naïve B cells (CD27 ⁻)	43	0.757	0.008 (-0.066 / 0.051)
Memory B cells (CD27 ⁺)	43	0.856	0.004 (-0.051 / 0.060)
Transitional B cells (CD27 ⁺ CD24 ^{hi} CD38 ^{hi})	43	0.358	0.007 (-0.025 / 0.011)
Marginal zone B cells (CD27 ⁺ IgD ⁺ IgM ⁺)	43	0.360	0.014 (-0.022 / 0.050)
CD5 ⁺ B cells	28	0.087	0.061 (-0.025 / 0.147)
<i>IL-10 production¹</i>			
IL-10 ⁺ Total B cells	33	0.388	-0.0017 (-0.0063 / 0.0030)
IL-10 ⁺ Naïve B cells	33	0.325	-0.0016 (-0.0054 / 0.0023)
IL-10 ⁺ Memory B cells	33	0.389	-0.0021 (-0.0079 / 0.0037)

Effect of duration of disease was calculated using a linear regression model including age and batch as covariates. β = beta coefficient and 95% confidence interval (CI) of the linear regression model. ¹Statistical tests were performed on log-transformed data because IL-10 phenotypes showed a strong right skew.