Supplementary methods

Gating strategy

To focus on well-known leukocyte differentiation steps and to illustrate the strength of our method, we focused on transitions of interest by usual bi-axial gates. We defined a lineage-negative population as $Sca1^{-}CD11b^{-}CD11c^{-}CX3CR1^{-}CD3e^{-}NK1.1^{-}CD4^{-}CD117^{-}$. Then, we define three sub-populations as follows: (i) $Lineage^{-}Ly6G+CD19^{-}$ neutrophils ; (ii) $Lineage^{-}CD11b^{-}Ly6G^{-}CD19^{+}IgD^{-}CD43^{-}$ Pre and Immature B-cells; (iii) $Lineage^{-}CD11b^{-}Ly6G^{-}CD19^{+}IgM^{+}IgD^{lo}$ Immature and Transitional B-cells.

In Fig. 1 we see the bone-marrow gating strategy; In Fig. 2 we see the lineage- gating for the B-cells.

List of Antibodies

All antibodies were purchased from Fluidigm and used at dilution ration 1:100, apart from Cisplatin and DNA which were used at 1:1000.

Antigen	Metal	Clone	Cat	Lot
CD45	89Y	30 F11	3089005B	2471519
Ly-6G	141Pr	1A8	3141008B	931506
CD11c	142Nd	N418	3142003B	2751404
CD69	143Nd	H1.2F3	3143004B	2301412
CD115	144Nd	AFS98	3144012B	2821412
CD45-RB	145Nd	C363.16A	3145012B	2311507
CD43	146Nd	S11	3146009B	2691401
CD19	149Sm	6D5	3149002B	301503
IgD	150Nd	11-26c.2a	3150011B	31409
IgM	151Eu	RMM-1	3151006B	3001411
NKp46	153Eu	29A1.4	3153006B	2211306
CD11b	154Sm	M1/70	3154006B	1531405
CD93	158Gd	AA4.1	3158015B	2321405
CXCR4	159Tb	L276F12	3159030B	2881606
B220	160Gd	RA3-6B2	3160012B	331513
Ly-6C	162Dy	HK1.4	3162014B	1041608
CX3CR1	164Dy	SA011F11	3164023B	1201614
CD3e	165Ho	145-2C11	3165020B	3181410
CD21	168Er	7G6	3168010B	2371409
Ly-6A/E	169Tm	D7	3169015B	331514
NK1.1	170Er	PK136	3170002B	901512
CD4	172Yb	RM4 5	3172003B	2791505
CD117	173Yb	2B8	3173004B	331524
MHC-II	174Yb	M5/114.15.2	3174003B	791514
CD127	175Yb	A7R34	3175006B	141524
Cisplatin	195Pt	N/A	201064	1801605
DNA	191/193Ir	N/A	201192A	1331616B

Supplementary figures

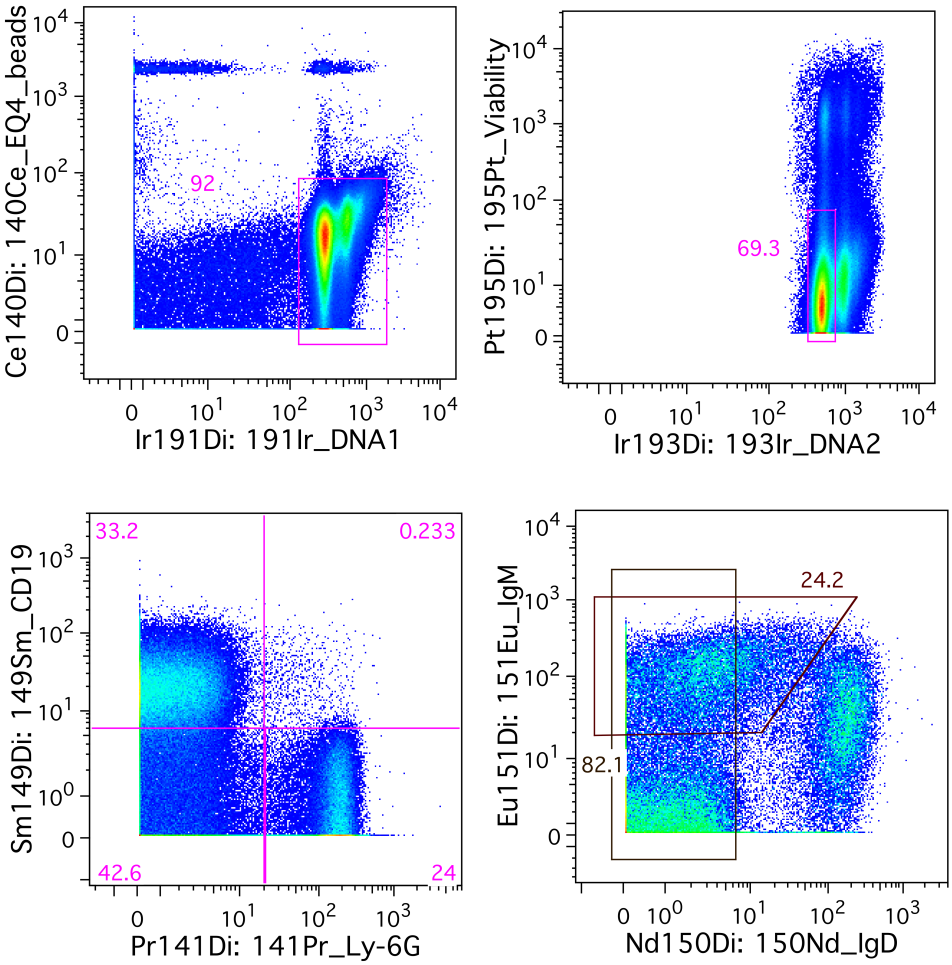

Figure 1. Gating the bone marrow: (A) Selecting cells as Beads-DNA+ then **(B)** live single cells by Cisplatin-DNA gating, followed by **(C)** Neutrophils defined as Ly6G+CD19- and B-cells as Ly6G-CD19+. The B-cells are further selected for lineage- according to Fig. 2 and then divided to **(D)** (i) Pre to Immature transition ($IgD^-/IgM^{-/+}$ gate) and (ii) Immature to Transitional (IgM^+/IgD^- gate).

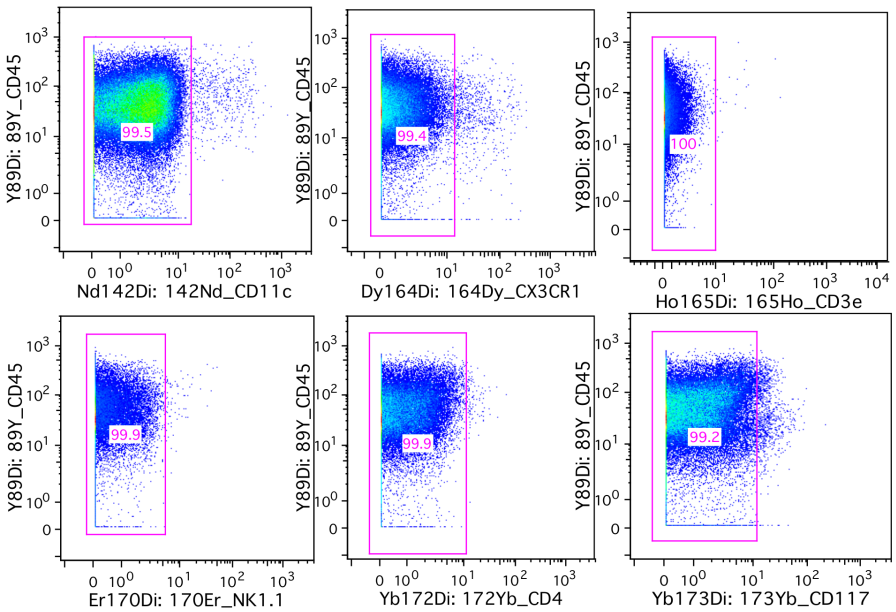

Figure 2. Lineage- gates: B-cells are selected for Ly6G-CD19+lineage- according to Fig. 1 and the lineage gates above.