**Supplemental Table 1: List of markers used in the study.**

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| --- | --- | --- | --- | --- | --- |
| **Metal Tag** | **Target** | **Clone** | **Supplier** | **Parameters for tSNE** | **Parameters for FlowSOM (CD8 and CD4 Tcells)** |
| 141 Pr | CCR6 | GO34E3  | Fluidigm  | Yes | Yes |
| 142 Nd | CD57 | HCD57 | Fluidigm | Yes | Yes |
| 144 Nd | CD38 | HIT2 | Fluidigm | Yes | Yes |
| 145 Nd | CD4 | RPA-T4  | Fluidigm | Yes | No |
| 146 Nd | CD8a | RPA-T8 | Fluidigm | Yes | No |
| 162 Dy | CD11c | Bu15  | Fluidigm | Yes | Yes |
| 155 Gd | CD27 | EPR8569 | Fluidigm | Yes | Yes |
| 156 Gd | CCR5 | NP-6G4 | Fluidigm | Yes | Yes |
| 160 Gd | CD14 | M5E2  | Fluidigm | No | No |
| 163 Dy | CD33 | WM53 | Fluidigm | No | No |
| 164 Dq | HLA-DR\* | L243  | Fluidigm | Yes | Yes |
| 166 Er | NKG2C\* | 134591 | R&D systems | No | Yes |
| 167 Er | KIR3DL1 | DX9 | Fluidigm | No | No |
| 171 Yb | CXCR5 | 51505 | Fluidigm | Yes | Yes |
| 209 Bi | CD11b | ICRF44 | Fluidigm | Yes | Yes |
| 159 Tb | CCR7 | GO43H7 | Fluidigm | Yes | Yes |
| 143 Nd | CD45Ra | HI100 | Fluidigm | Yes | Yes |
| 149 Sm | CD25 | EPR6452 | Fluidigm | Yes | Yes |
| 154 Sm | Tim3 | F38-2E2 | Fluidigm | Yes | Yes |
| 115 Ln | CX3CR1\* | 2A9-1 | Fluidigm | No | No |
| 148 Nd | CD16 | 3G8 | Fluidigm | Yes | Yes |
| 151 Eu | CD123 | 6H6 | Fluidigm | No | No |
| 165 Ho | CD163 | GHI/61 | Fluidigm | No | No |
| 174 Yb | CD49b | P1E6-C5 | Fluidigm | No | No |
| 175 Lu | PD1 | EH12.2H7 | Fluidigm | Yes | Yes |
| 150 Nd | CD86 | IT2.2  | Fluidigm | No | No |
| 161 Dy | CD80 | 2D10.4 | Fluidigm | No | No |
| 170 Er | CTLA4 | 14D3 | Fluidigm | Yes | Yes |
| 172 Yb | Ki67 | Ki-67 | Fluidigm | Yes | Yes |
| 168 Er | IFN- | B27  | Fluidigm | Yes | Yes |
| 152 Sm | KIR2DL1\* | REA248 | Miltenyi | No | Yes |
| 173 Yb | KIR2DL2/DL3 | DX-27 | Fluidigm | No | Yes |
| 169 Tm | NKG2A\* | Z199 | Fluidigm | No | Yes |
| Qdot 605 | CD3 | UCHT1 | Fluidigm | Yes | No |
| Cisp 194 | CD19\* | HIB19 | Fluidigm | No | No |
| Cisp 198 | CD66b\* | 80H3 | Fluidigm | No | No |
| 176 Yb | CD56 | NCAM16.2 | Fluidigm | Yes | Yes |
| 89 Y | CD45 | HI30 | Fluidigm | No | No |
| 153 Eu | CCR2 | RMO52 | Fluidigm | No | Yes |
| 147 Sm | P-STAT5 | pY694 (47) | Fluidigm | Yes | Yes |

\*: in-house mAb conjugated to metal isotopes