Supplementary Table 2: Antibodies used for immune-phenotyping (CyTOF analysis)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Antibody** | **Clone** |  | **Antibody** | **Clone** |
| 1  | CD45 | HI30 | 27  | CD3 | UCHT1 |
| 2  | CD8 |  \*RPA-T8 | 28  | CXCR5 | RF8B2 |
| 3  | CD11b |  \*ICRF44 | 29  | IgM | MHM-88 |
| 4  | CD33 |  \*WM53 | 30  | CD20 | \*2H7 |
| 5  | CD66b | \*6/40c | 31  | CD25 | \*M-A251 |
| 6  | CD40 | 5C3 | 32  | CD38 |  \*HIT2 |
| 7  | HLADR  | L243 | 33  | CD56 | HCD56 |
| 8  | CD69 | FN50 | 34  | CD16 | 3G8 |
| 9  | CD4 | RPA-T4 | 35  | #GZN | \*\*GB11 |
| 10  | IgD | IA62 | 36  | #Tcf1 | \*7F11A10 |
| 11  | CD14 | RMO52 | 37  | #Tbet | 4B10 |
| 12  | CD127 | A019D5 | 38  | #Foxp3 | PCH101 |
| 13  | Anti-Biotin | 1D4-C5 | 39  | #Bcl6 | K112-91 |
| 14  | ICOS | C398.4A | 40  | #GATA3 | TWAJ |
| 15  | CD21 | BL13 | 41  | #Ki67 | B56 |
| 16  | CD45RA | HI100 |   |   |   |
| 17  | TIGIT | MBSA43 |   |   |   |
| 18  | CD27 | L128 |   |   |   |
| 19  | IgG | \*M1310G05 |   |   |   |
| 20  | CD11c | \*Bu15 |   |   |   |
| 21  | CCR7 | G043H7 |   |   |   |
| 22  | CD28 | CD23.2 |   |   |   |
| 23  | CD45RO | UCHL1 |   |   |   |
| 24  | PD-1 | EH12.2H7 |   |   |   |
| 25  | NKG2D | ON72 |   |   |   |
| 26  | CD19 | HIB19 |   |   |   |

All metal conjugated antibodies purchased from Fluidigm

Purified antibodies purchased from \*Biolegend and \*\* Invitrogen were metal tagged using Fluidigm metal conjugation kit following manufacturers methods.

#Intracellular markers

Supplementary Table 3: Antibodies used for flow cytometry

|  |  |  |
| --- | --- | --- |
|  | **Antibody** | **Clone** |
| 1  | IgD | IA6-2 |
| 2  | IgG | M1310G05 |
| 3  | CD19 | HIB19 |
| 4  | CD27 | O323 |
| 5  | \*CD38 | AT-1 |
| 6  | anti-Biotin | 1D4-C5 |
| 7  | CD21 | Bu34 |
| 8  | IgM | MHM-88 |
| 9  | CD20 | S18015E |
| 10  | Live/Dead |  |
| 12  | RBD | Biotinylated Recombinant SARS-CoV-2 S Protein RBD (200 µg/mL) Biolegend |

Fluorescently labeled antibodies purchased from Biolegend

\*Fluorescently labeled antibody purchased from StemCell Technologies

Supplementary Table 4: Antibodies used for AIM Assay (CyTOF analysis)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Antibody** | **Clone** |  | **Antibody** | **Clone** |
| 1  | CD45 | HI30 | 27  | #GZN | \*\*GB11 |
| 2  | CD8 |  \*RPA-T8 | 28  | #Tcf1 | \*7F11A10 |
| 3  | OX40 | ACT35 | 29  | #Tbet | 4B10 |
| 4  | HLADR  | L243 | 30  | #Foxp3 | PCH101 |
| 5  | CD69 | FN50 | 31  | #Bcl6 | K112-91 |
| 6  | CD4 | RPA-T4 | 32  | #GATA3 | TWAJ |
| 7  | CD14 | RMO52 | 33  | #Ki67 | B56 |
| 8  | CD127 | A019D5 |   |   |   |
| 9  | ICOS | C398.4A |   |   |   |
| 10  | CD45RA | HI100 |   |   |   |
| 11  | TIGIT | MBSA43 |   |   |   |
| 12  | CD27 | L128 |   |   |   |
| 13  | CD11c | \*Bu15 |   |   |   |
| 14  | CCR7 | G043H7 |   |   |   |
| 15  | CD28 | CD23.2 |   |   |   |
| 16  | CD45RO | UCHL1 |   |   |   |
| 17  | PD-1 | EH12.2H7 |   |   |   |
| 18  | NKG2D | ON72 |   |   |   |
| 19  | CD19 | HIB19 |   |   |   |
| 20  | CD3 | UCHT1 |   |   |   |
| 21  | CXCR5 | RF8B2 |   |   |   |
| 22  | CD20 | \*2H7 |   |   |   |
| 23  | CD25 | \*M-A251 |   |   |   |
| 24  | CD38 |  \*HIT2 |   |   |   |
| 25  | CD56 | HCD56 |   |   |   |
| 26  | CD137 | 4B4-1 |   |   |   |

All metal conjugated antibodies were purchased from Fluidigm

Purified antibodies purchased from \*Biolegend and \*\* Invitrogen were metal tagged using Fluidigm metal conjugation kit following manufacturers methods.

#Intracellular markers