

**Supplemental figure 8. Key resources tables (Antibodies, Chemicals, Oligonucleotides, Software and algorithms)**

| <b>Antibodies</b>                                                                  | <b>Source</b>  | <b>Identifier</b>             |
|------------------------------------------------------------------------------------|----------------|-------------------------------|
| Rat anti-mouse CD45 BV421 (clone:30-F11)                                           | BD Biosciences | Cat# 563890; RRID: AB_2651151 |
| Rat anti-mouse CD45 APC (clone:30-F11)                                             | BioLegend      | Cat# 103112; RRID: AB_312977  |
| Hamster anti-mouse CD11c PE (clone:HL3)                                            | BD Biosciences | Cat# 553802; RRID: AB_396684  |
| Rat anti-mouse CD3 PE (clone:17A2)                                                 | BioLegend      | Cat# 100206; RRID: AB_312663  |
| Rat anti-mouse CD4 PE-Cy7 (clone:GK1.5)                                            | BD Biosciences | Cat# 563933; RRID: AB_2738492 |
| Rat anti-mouse CD8a FITC (clone:53-6.7)                                            | BD Biosciences | Cat# 553031; RRID: AB_394568  |
| Hamster anti-mouse CD80 PE-CF594 (clone:16-10A1)                                   | BD Biosciences | Cat# 562504; RRID: AB_2737630 |
| Rat anti-mouse CD86 Alexa Fluor 700 (clone:GL-1)                                   | BioLegend      | Cat# 105024; RRID: AB_493721  |
| Mouse anti-mouse H-2K <sup>b</sup> /D <sup>b</sup> APC/Fire 750 (clone:28-8-6)     | BioLegend      | Cat# 114618; RRID: AB_2750198 |
| Rat anti-mouse H-2 FITC (clone:M1/42)                                              | BioLegend      | Cat# 125508; RRID: AB_1236470 |
| Rat anti-mouse I-A/I-E Alexa Fluor 647 (clone:M5/114.15.2)                         | BioLegend      | Cat# 107618; RRID: AB_493525  |
| Mouse anti-mouse H-2K <sup>b</sup> bound to SIINFEKL APC/Fire 750 (clone:25-D1.16) | BioLegend      | Cat# 141614; RRID: AB_2750524 |
| Mouse T-Select H-2K <sup>b</sup> OVA Tetramer-SIINFEKL APC                         | MBL            | Cat# TS-5001-2C               |
| Rat anti-mouse CD16/32 (clone:93)                                                  | BioLegend      | Cat# 101320; RRID: AB_1574975 |
| Mouse anti-human CD45 BV480 (clone:HI30)                                           | BD Biosciences | Cat# 566115; RRID: AB_2739517 |
| Mouse anti-human CD40 BV421 (clone:5C3)                                            | BioLegend      | Cat# 334332; RRID: AB_2564211 |
| Mouse anti-human CD80 Alexa Fluor 647 (clone:2D10)                                 | BioLegend      | Cat# 305216; RRID: AB_528875  |
| Mouse anti-human CD86 BV711 (clone:IT2.2)                                          | BioLegend      | Cat# 305440; RRID: AB_2565835 |
| Mouse anti-human HLA-ABC FITC (clone:G46-2.6)                                      | BioLegend      | Cat# 311404; RRID: AB_314873  |
| Mouse anti-human HLA-DR PE (clone:G46-6)                                           | BD Biosciences | Cat# 555812; RRID: AB_396146  |

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| 7-AAD                                                         | BD Biosciences            | Cat# 559925; RRID: AB_2869266    |
| Propidium Iodide (PI)                                         | MBL                       | Cat# 4700                        |
| Rabbit anti-mouse CD8a (clone:D4W2Z)                          | Cell Signaling Technology | Cat# 98941; RRID: AB_2756376     |
| Rabbit anti-mouse CD11c (clone:D1V9Y)                         | Cell Signaling Technology | Cat# 97585; RRID: AB_2800282     |
| Rat anti-mouse I-A/I-E (clone:M5/114.15.2)                    | Thermo Fisher Scientific  | Cat# 14-5321-82; RRID: AB_467561 |
| Rat anti-mouse Granzyme B (clone:16G6)                        | Thermo Fisher Scientific  | Cat# 14-8822-82; RRID: AB_468530 |
| Rat anti-mouse Perforin (clone:CB5.4)                         | Abcam                     | Cat# ab16074; RRID: AB_302236    |
| Goat anti-mouse LAG-3                                         | R and D Systems           | Cat# AF3328; RRID: AB_2234405    |
| Rabbit anti-human CD11c (clone:EP1347Y)                       | Abcam                     | Cat# ab52632; RRID: AB_2129793   |
| Rabbit anti-LC3A/B (clone:D3U4C)                              | Cell Signaling Technology | Cat# 12741; RRID: AB_2617131     |
| Mouse anti-human HLA-ABC (clone:EMR8-5)                       | Abcam                     | Cat# ab70328; RRID: AB_1269092   |
| Mouse anti-human HLA-DR/DP/DQ (clone:CR3/43)                  | Thermo Fisher Scientific  | Cat# MA1-25914; RRID: AB_794857  |
| Mouse anti-human Cytokeratin 19 (clone:RCK108)                | Agilent                   | Cat# M0888; RRID: AB_2234418     |
| Donkey anti-rabbit IgG (H+L) Alexa Fluor 546                  | Thermo Fisher Scientific  | Cat# A-10040; RRID: AB_2534016   |
| Donkey anti-mouse IgG (H+L) Alexa Fluor 488                   | Thermo Fisher Scientific  | Cat# A-21202; RRID: AB_141607    |
| Donkey anti-rat IgG (H+L) Alexa Fluor 488                     | Thermo Fisher Scientific  | Cat# A-21208; RRID: AB_2535794   |
| Donkey anti-goat IgG (H+L) Alexa Fluor 488                    | Thermo Fisher Scientific  | Cat# A-11055; RRID: AB_2534102   |
| EnVision <sup>np</sup> System-HRP Labeled Polymer Anti-Rabbit | Dako                      | Cat# 4003; AB_2630375            |
| EnVision <sup>np</sup> System-HRP Labeled Polymer Anti-Mouse  | Dako                      | Cat# 4001; AB_2827819            |
| DAPI                                                          | Dojindo                   | Cat# 340-07971                   |
| Rabbit anti-ATG7 (clone:D12B11)                               | Cell Signaling Technology | Cat# 8558; RRID: AB_10831194     |
| Rabbit anti-ATG5 (clone:D5F5U)                                | Cell Signaling Technology | Cat# 12994; RRID: AB_2630393     |
| Rabbit anti-ATG4B (clone:D1G2R)                               | Cell Signaling Technology | Cat# 5299; RRID: AB_10622184     |

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|------------------------------------------------------|---------------------------|-------------------------------|
| Rabbit anti-p62 (SQSTM1)                             | MBL International         | Cat# PM045; RRID: AB_1279301  |
| Rabbit anti- $\beta$ -Actin (clone:13E5)             | Cell Signaling Technology | Cat# 4970; RRID: AB_2223172   |
| Anti-rabbit IgG, HRP-linked Antibody                 | Cell Signaling Technology | Cat# 7074; RRID: AB_2099233   |
| Anti-mouse IgG, HRP-linked Antibody                  | Cell Signaling Technology | Cat# 7076; RRID: AB_330924    |
| InVivoMAb anti-mouse LAG-3 (clone:C9B7W)             | Bio X Cell                | Cat# BE0174; RRID:AB_10949602 |
| InVivoMAb rat IgG1 isotype control (clone:HRPN)      | Bio X Cell                | Cat# BE0088; RRID: AB_1107775 |
| InVivoPlus anti-mouse IFNAR-1 (clone:MAR1-5A3)       | Bio X Cell                | Cat# BP0241; RRID: AB_2687723 |
| InVivoMAb mouse IgG1 isotype control (clone:MOPC-21) | Bio X Cell                | Cat# BE0083; RRID: AB_1107784 |

| Chemicals                                      | Source               | Identifier       |
|------------------------------------------------|----------------------|------------------|
| Chloroquine (CQ)                               | Sigma-Aldrich        | Cat# C6628       |
| 3-Methyladenine (3-MA)                         | Sigma-Aldrich        | Cat# M9281       |
| Murine GM-CSF                                  | Wako                 | Cat# 077-04674   |
| Murine FLT3L                                   | Pepro Tech           | Cat# 250-31L     |
| Human GM-CSF                                   | Primmune Inc         | Cat# PMC-GM-300  |
| Human IL-4                                     | Primmune Inc         | Cat# PMC-IL4-100 |
| DMEM                                           | Sigma-Aldrich        | Cat# 5030        |
| RPMI-1640                                      | Sigma-Aldrich        | Cat# R2405       |
| Streptomycin/Penicillin                        | Invitrogen           | Cat# 15140122    |
| FBS                                            | gibco                | Cat# 10270106    |
| Cultrex 3-D Culture Matrix                     | Bio-Techne           | Cat# 3445        |
| pH7.0 Dilluted Buffer                          | Bio X Cell           | Cat# IP0070      |
| Lysing Buffer                                  | BD Biosciences       | Cat# 555899      |
| CFSE Cell Division Tracker Kit                 | BioLegend            | Cat# 423801      |
| Puromycin                                      | Takara Bio           | Cat# 631305      |
| iTaq Universal SYBR Green One-Step Kit         | Bio-Rad Laboratories | Cat# 170-8892    |
| PRO-PREP Protein Extraction Solution           | iNtRON Biotechnology | Cat# 17081       |
| Vector TrueVIEW Autofluorescence Quenching Kit | Vector Laboratories  | Cat# SP-8400     |
| Anti-PE MicroBeads                             | Miltenyi Biotec      | Cat# 130-048-801 |
| Naïve CD8+ T cell Isolation Kit                | Miltenyi Biotec      | Cat# 130-096-543 |
| Tumor Dissociation Kit                         | Miltenyi Biotec      | Cat# 130-960-730 |

|                               |                 |                  |
|-------------------------------|-----------------|------------------|
| Dead Cell Removal Kit         | Miltenyi Biotec | Cat# 130-090-101 |
| Amersham™ ECL Select™ reagent | Cytiva          | Cat# RPN2235     |

| Oligonucleotides                                                                   | Source        | Identifier                |
|------------------------------------------------------------------------------------|---------------|---------------------------|
| pLV[Exp]-CMV>mOVA-EF1A>EGFP/Neo                                                    | VectorBuilder | VB221104-1064htn          |
| pLV[Exp]-EGFP:T2A:Puro-EF1A>mCherry                                                | VectorBuilder | VB010000-9298rtf          |
| MISSION shRNA clone for mouse ATG7#1<br>Target sequence:<br>CCTAAAGAAGTACCACTTCTA  | Sigma-Aldrich | TRCN0000092166; NM_028835 |
| MISSION shRNA clone for mouse ATG7#2<br>Target sequence:<br>GTCCTTCCATGTGCACTAATC  | Sigma-Aldrich | TRCN0000305928; NM_028835 |
| MISSION shRNA clone for mouse ATG7#3<br>Target sequence:<br>GCCAACATCCCTGGATAACAAG | Sigma-Aldrich | TRCN0000375444; NM_028835 |
| MISSION shRNA clone for mouse ATG7#4<br>Target sequence:<br>TCTTACCCTGCTCCATCAAGA  | Sigma-Aldrich | TRCN0000375421; NM_028835 |
| MISSION shRNA clone for mouse ATG7#5<br>Target sequence:<br>TTCTGTACGGTTCGATAATG   | Sigma-Aldrich | TRCN0000305991; NM_028835 |
| MISSION shRNA clone for mouse ATG5#1<br>Target sequence:<br>CCTTGGAACATCACAGTACAT  | Sigma-Aldrich | TRCN0000099431; NM_053069 |
| MISSION shRNA clone for mouse ATG5#2<br>Target sequence:<br>GCAGAACCATACTATTTGCTT  | Sigma-Aldrich | TRCN0000099432; NM_053069 |
| MISSION shRNA clone for mouse ATG5#3<br>Target sequence:<br>AGCCGAAGCCTTTGCTCAATG  | Sigma-Aldrich | TRCN0000375819; NM_053069 |
| MISSION shRNA clone for mouse ATG4B#1<br>Target sequence:<br>GACGAAATCTTGTCTGATGTT | Sigma-Aldrich | TRCN0000030942; NM_174874 |
| MISSION shRNA clone for mouse ATG4B#2<br>Target sequence:<br>CCTTGGCTGTTACATAGCAA  | Sigma-Aldrich | TRCN0000030941; NM_174874 |
| MISSION shRNA clone for mouse ATG4B#3<br>Target sequence:<br>CCATCCATCAGATAGCGCAAA | Sigma-Aldrich | TRCN0000030940; NM_174874 |
| MISSION pLKO.1-puro Non-Mammalian<br>shRNA Control Transduction Particles          | Sigma-Aldrich | Cat# SHC016V              |
| siRNA for mouse ATG7#1                                                             |               |                           |

|                                                                     |            |                                                       |
|---------------------------------------------------------------------|------------|-------------------------------------------------------|
| Target sequence:<br>TAGCATCATCTTTGAAGTGAA                           | QIAGEN     | Cat# SI00900515; NM_001253717                         |
| siRNA for mouse ATG7#2<br>Target sequence:<br>CAGCTCTGAACTCAATAATAA | QIAGEN     | Cat# SI00900522; NM_001253717                         |
| siRNA for human ATG5#1<br>Target sequence:<br>CTAGGAGATCTCCTCAAAGAA | QIAGEN     | Cat# SI02633946; NM_004849                            |
| siRNA for human ATG5#2<br>Target sequence:<br>AACCTTTGGCCTAAGAAGAAA | QIAGEN     | Cat# SI02655310; NM_004849                            |
| siRNA for human ATG7#1<br>Target sequence:<br>CAGTGAATGTATGGACCCTAA | QIAGEN     | Cat# SI04952339;<br>NM_001136031,001144912,00639<br>5 |
| siRNA for human ATG7#2<br>Target sequence:<br>ATCAGTGGATCTAAATCTCAA | QIAGEN     | Cat# SI02655373;<br>NM_001136031,001144912,00639<br>5 |
| Negative control siRNA                                              | QIAGEN     | Cat# 1027310                                          |
| Primer: OVA Forward:<br>CAGCTGCAGATCAAGCCAGAG                       | Takara Bio | GA287168; NM_205152.3                                 |
| Primer: OVA Reverse:<br>AACCATTGCAGTTTGAGAATCCAC                    | Takara Bio | GA287168; NM_205152.3                                 |
| Primer: GAPDH Forward:<br>TGTGTCCGTCGTGGATCTGA                      | Takara Bio | MA050371; NM_008084.3                                 |
| Primer: GAPDH Reverse:<br>TTGCTGTTGAAGTCGCAGGAG                     | Takara Bio | MA050371; NM_008084.3                                 |

| Software and Algorithm         | Source                                 | Identifier                                                                                                                              |
|--------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| ChemiDoc XRS System            | Bio-Rad Laboratories                   | Cat# 1708265J1NPC                                                                                                                       |
| Quantity One Software          | Bio-Rad Laboratories                   | Cat# 1708265J1NPC                                                                                                                       |
| Infinite F200 PRO              | Tecan                                  | Cat# 30190085                                                                                                                           |
| FlowJo (ver.10.5.3, BD)        | BD Biosciences                         | <a href="https://www.flowjo.com">https://www.flowjo.com</a>                                                                             |
| GraphPad Prism (ver.9.3.1)     | GraphPad                               | <a href="https://www.graphpad.com">https://www.graphpad.com</a>                                                                         |
| BZ-X800 analyzer (ver.1.1.2.4) | KEYENCE                                | <a href="https://www.keyence.com/ss/products/microscope/bz-x800_long/">https://www.keyence.com/ss/products/microscope/bz-x800_long/</a> |
| R v3.6.3                       | R Foundation for Statistical Computing | <a href="https://www.r-project.org">https://www.r-project.org</a>                                                                       |
| Seurat v3.1.5                  | Stuart, et al., 2019                   | <a href="https://satijalab.org/seurat">https://satijalab.org/seurat</a>                                                                 |
| Cell Ranger v7.1.0             | 10X Genomics                           | <a href="https://www.10xgenomics.com">https://www.10xgenomics.com</a>                                                                   |
| BioRender                      | BioRender.com                          | <a href="https://www.biorender.com">https://www.biorender.com</a>                                                                       |