Suppl. table 3: overlap of genes differentially expressed in aged WT and aged Ercc1- $^{1/\Delta}$ mice

| GO BP Term | # of Genes | P-value | Genes |
|-----------------------------------------------------------------------------------|------------|----------------------|-----------------------------------------------------------|
| immune response | 13 | 1.21E-07 | PTPRC, LY86, TLR1, H2-AB1, C1QC, CD74, C1QB, CCR5, GP49A, |
| | | | CCR2, LILRB4, H2-AA, FCER1G, CLEC7A |
| defense response | 12 | 6.41E-07 | C1QB, PTPRC, LYZ2, CCR5, LY86, CCR2, TLR1, H2-AA, FCER1G, |
| | | | CLEC7A, C1QC, CD74 |
| positive regulation of response to stimulus | 8 | 5.60E-06 | C1QB, PTPRC, EYA1, H2-AA, FCER1G, EDA2R, CLEC7A, C1QC |
| antigen processing and presentation of | 4 | 2.70E-05 | H2-AA, FCER1G, H2-AB1, CD74 |
| exogenous peptide antigen via MHC class II | | | |
| antigen processing and presentation of | 4 | 2.70E-05 | H2-AA, FCER1G, H2-AB1, CD74 |
| peptide antigen via MHC class II | | | |
| antigen processing and presentation of | 4 | 4.63E-05 | H2-AA, FCER1G, H2-AB1, CD74 |
| peptide or polysaccharide antigen via MHC | | | |
| class II | | 0.255.05 | HA AA ECEDIC HA ADI CDEA |
| antigen processing and presentation of | 4 | 8.37E-05 | H2-AA, FCER1G, H2-AB1, CD74 |
| exogenous peptide antigen immunoglobulin mediated immune response | 5 | 8.91E-05 | CLOB H2 AA ECEBIC CLOC CD74 |
| B cell mediated immunity | 5 | 8.91E-05 1.01E-04 | C1QB, H2-AA, FCER1G, C1QC, CD74 |
| | | | C1QB, H2-AA, FCER1G, C1QC, CD74 |
| immune effector process | 7 | 1.06E-04 | C1QB, PTPRC, H2-AA, FCER1G, C1QC, CD74 |
| positive regulation of immune system process | • | 1.15E-04 | C1QB, PTPRC, H2-AA, FCER1G, CLEC7A, C1QC, CD74 |
| positive regulation of immune response | 6 | 1.51E-04 | C1QB, PTPRC, H2-AA, FCER1G, CLEC7A, C1QC |
| antigen processing and presentation of | 4 | 1.53E-04 | H2-AA, FCER1G, H2-AB1, CD74 |
| exogenous antigen lymphocyte mediated immunity | 5 | 1.85E-04 | CLOB H2 AA ECEBIC CLOC CD74 |
| | 7 | 1.86E-04 | C1QB, H2-AA, FCER1G, C1QC, CD74 |
| inflammatory response | 5 | | C1QB, CCR5, LY86, CCR2, TLR1, CLEC7A, C1QC |
| adaptive immune response based on somatic recombination of immune receptors built | 5 | 2.72E-04 | C1QB, H2-AA, FCER1G, C1QC, CD74 |
| from immunoglobulin superfamily domains | | | |
| adaptive immune response | 5 | 2.72E-04 | C1QB, H2-AA, FCER1G, C1QC, CD74 |
| activation of immune response | 5 | 2.98E-04 | C1QB, PTPRC, FCER1G, CLEC7A, C1QC |
| antigen processing and presentation of | 4 | 3.00E-04 | H2-AA, FCER1G, H2-AB1, CD74 |
| peptide antigen | - | | , -,, -, · · |
| leukocyte mediated immunity | 5 | 3.40E-04 | C1QB, H2-AA, FCER1G, C1QC, CD74 |
| immune response-regulating cell surface | 4 | 5.92E-04 | PTPRC, SH2D1B1, FCER1G, CLEC7A |
| receptor signaling pathway | | | |
| immune response-regulating signal | 4 | 9.67E-04 | PTPRC, SH2D1B1, FCER1G, CLEC7A |
| transduction | | | |