

Table S1 Forty-three ICGs retrieved from literatures

Gene symbol	Descriptions
<i>BTLA</i>	B and T lymphocyte associated
<i>BTN2A1</i>	Butyrophilin subfamily 2 member A1
<i>CD160</i>	CD160 molecule
<i>CD209</i>	CD209 molecule
<i>CD226</i>	CD226 molecule
<i>CD274</i>	CD274 molecule
<i>CD276</i>	CD276 molecule
<i>CD28</i>	CD28 molecule
<i>CD40</i>	CD40 molecule
<i>CD40LG</i>	CD40 ligand
<i>CD47</i>	CD47 molecule
<i>CD86</i>	CD86 molecule
<i>CD96</i>	CD96 molecule
<i>CEACAM1</i>	CEA cell adhesion molecule 1
<i>CTLA4</i>	Cytotoxic T-lymphocyte associated protein 4
<i>HLA-A</i>	Major histocompatibility complex, class I, A
<i>HLA-B</i>	Major histocompatibility complex, class I, B
<i>HLA-C</i>	Major histocompatibility complex, class I, C
<i>HLA-DMB</i>	Major histocompatibility complex, class II, DM beta
<i>HLA-DPB1</i>	Major histocompatibility complex, class II, DP beta 1
<i>HLA-DQA1</i>	Major histocompatibility complex, class II, DQ alpha 1
<i>HLA-DQB1</i>	Major histocompatibility complex, class II, DQ beta 1
<i>HLA-DRA</i>	Major histocompatibility complex, class II, DR alpha
<i>HLA-B</i>	Major histocompatibility complex, class I, B
<i>HLA-F</i>	Major histocompatibility complex, class I, F
<i>ICOS</i>	Inducible T cell costimulator
<i>ICOSLG</i>	Inducible T cell costimulator ligand
<i>IDO1</i>	Indoleamine 2,3-dioxygenase 1
<i>KIR2DL1</i>	Killer cell immunoglobulin like receptor, two Ig domains and long cytoplasmic tail 1
<i>KIR2DL3</i>	Killer cell immunoglobulin like receptor, two Ig domains and long cytoplasmic tail 2
<i>KIR3DL2</i>	Killer cell immunoglobulin like receptor, two Ig domains and long cytoplasmic tail 3
<i>LAG3</i>	Lymphocyte activating 3
<i>LGALS9</i>	Galectin 9
<i>PDCD1</i>	Programmed cell death 1
<i>PDCD1LG2</i>	Programmed cell death 1 ligand 2
<i>PVR</i>	PVR cell adhesion molecule
<i>SIRPA</i>	Signal regulatory protein alpha
<i>TDO2</i>	Tryptophan 2,3-dioxygenase
<i>TNFRSF14</i>	Tumor necrosis factor receptor superfamily member 14
<i>TNFRSF18</i>	Tumor necrosis factor receptor superfamily member 18
<i>TNFSF14</i>	Tumor necrosis factor superfamily member 14
<i>TNFSF18</i>	Tumor necrosis factor superfamily member 18
<i>TNFSF9</i>	Tumor necrosis factor superfamily member 9

ICGs, immune checkpoint genes.