

**Table S2. MHC genes list detected in the NSCLC tissue dataset**

No.	Symbol	MHC class
1	<i>HLA-DOB</i>	II
2	<i>HLA-E</i>	I
3	<i>HLA-C</i>	I
4	<i>HLA-B</i>	I
5	<i>HLA-G</i>	I
6	<i>HLA-A</i>	I
7	<i>HLA-F</i>	I
8	<i>HLA-DQA2</i>	II
9	<i>HLA-DQA1</i>	II
10	<i>HLA-DRA</i>	II
11	<i>HLA-DRB5</i>	II
12	<i>HLA-DQB1</i>	II
13	<i>HLA-DRB1</i>	II
14	<i>HLA-DMA</i>	II
15	<i>HLA-DPB1</i>	II
16	<i>HLA-DPA1</i>	II
17	<i>HLA-DMB</i>	II
18	<i>HLA-DOA</i>	II

**Note:** The *MHC* genes family, which are also called human leukocyte antigen (*HLA*), is mainly divided into two subgroups: class I, class II; *MHC* I genes present antigens to the TCRs of CTL cells and *MHC* II genes present antigens to the TCRs of Th cells. The genes were clustered using hierarchical clustering by Euclidean distance and the order was consistent with that displayed in the Fig. 3A.