**Supplemental figures and tables:**

Table 1. Clinico-pathologic features of the Non-small cell lung cancer cohorts (Cohort A, B and C)

Table 2. Cox regression model with clinicopathologic features, tumor B7-H3, B7-H4 and PD-L1 protein expression risk ratios for 3 cohorts.

Figure 1. B7-H3 antibody validation

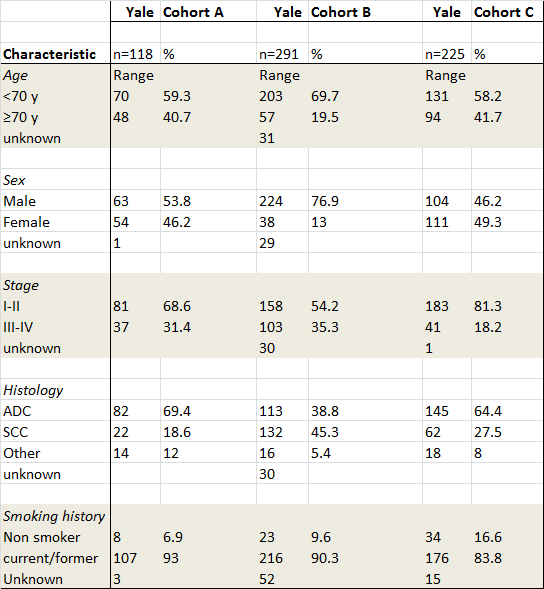
Figure 2. B7-H4 antibody validation

Figure 3. B7-H3 tumor and stromal protein expression regression, staining examples

Figure 4. Co-expression co-localization of B7-H3 and PD-L1

Figure 5. Additional images for Co-expression co-localization of B7-H3 and B7-H4

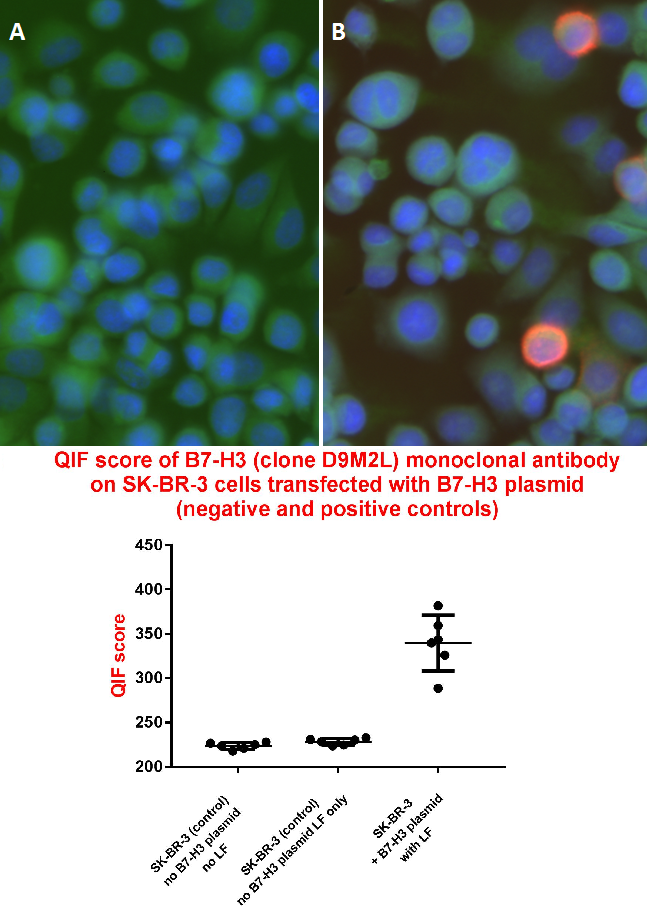
**Table 1.** Clinico-pathologic features of the Non-Small Cell Lung Cancer cohorts (Cohort A, B and C)



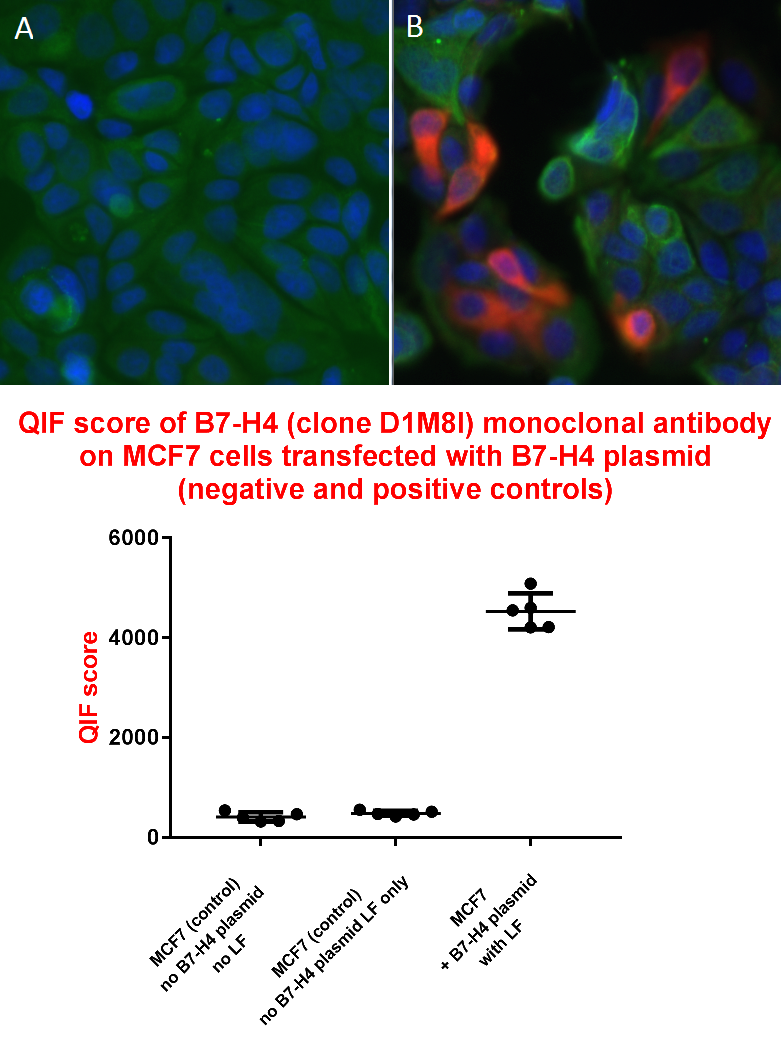
**Table 2.**  Cox regression model with clinicopathologic features, tumor B7-H3, B7-H4 and PD-L1 protein expression risk ratios for 3 cohorts. B7-H3 tumor QIF score risk ratios are highlighted in the redbox



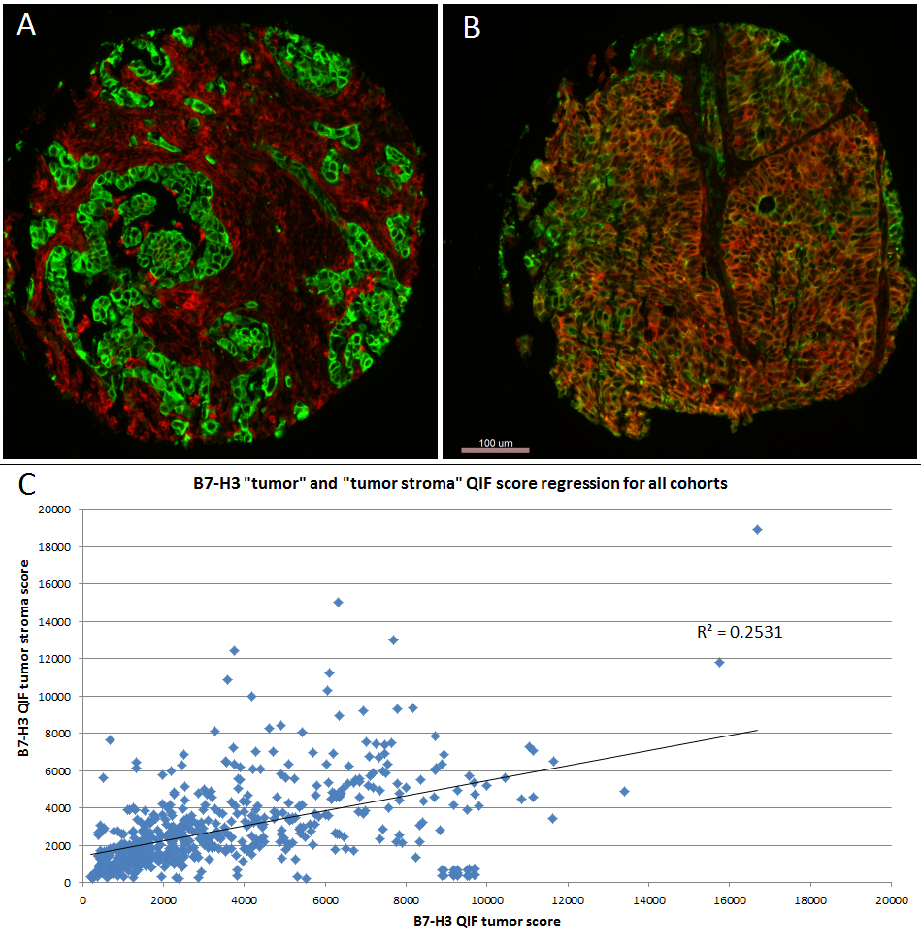
**Figure 1. B7-H3 antibody validation**, Representative fluorescence images showing the B7-H3 plasmid transfected SK-BR-3 cell lines A)negative control, B) positive control; below QIF score distribution of highest 5 Field of view for the negative controls and plasmid transfected cell lines. lines are highlighting the mean with standard deviation.



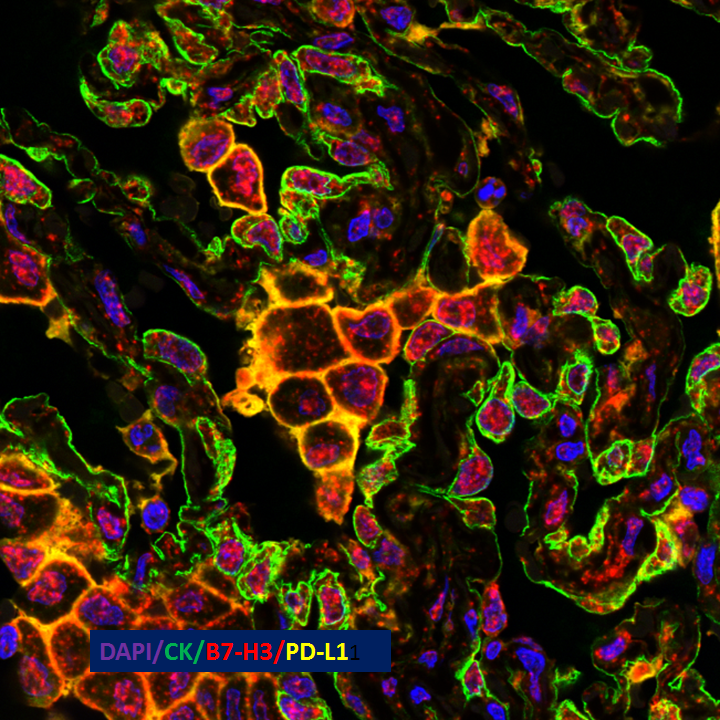
**Figure 2. B7-H4 antibody validation**, Representative fluorescence images showing the B7-H4 plasmid transfected cell lines A)negative control, B) positive control; below QIF score distribution of highest 5 Field of view for the negative controls and plasmid transfected cell lines, lines are highlighting the mean with standard deviation.



**Figure 3.** Representative fluorescence images showing the stromal dominant (A), and tumor dominant (B) B7-H3 protein expression on a TMA spot, Cytokeratin as tumor mask in green channel and B7-H3m target protein in red channel, C tumor and tumor stroma QIF scores in a combined analysis of Cohort A, B and C.



**Figure 4.** Detection of B7-H3 and PD-L1 protein expression by confocal microscopy to assess co-localization in lung cancer. Representative fluorescence images showing the simultaneous detection of B7-H3 (red channel), PD-L1 (yellow channel), cytokeratin (green channel) and DAPI (blue channel)



**Figure 5**. Detection of B7-H3 and B7-H4 protein expression to assess co-localization using immunofluorescence (QIF) in lung cancer. A) Representative fluorescence images showing the simultaneous detection of B7-H3 (red channel), B7-H4 (blue channel) and cytokeratin (green channel, inserted box is highlighting the area that has been magnified in figure B-D. B) B7-H3 (red channel), Cytokeratin (tumor mask in green channel). C) B7-H3 (red channel), B7-H4 (blue channel) and cytokeratin (green channel), D) B7-H4 (blue channel), Cytokeratin (green channel) Bar=100 μm.

