**Supplementary Figure S1.**

(**a**) Quantitative analysis of PD-L1 mRNA and protein expression compared *TP53* mutation with *TP53* wild type tumor. (**b**) Quantitative analysis of PD-L1 mRNA and protein expression compared *KRAS* mutation with *KRAS* wild type tumor. (**c**) Immunohistochemistry (IHC) analysis of PD-L1 expression (strong: ≥50% vs. weak: 1-49% vs. negative: <1%) based on *TP53* mutation status in a cohort of 93 lung adenocarcinoma. NS, no significant; mut, mutation; wt, wild type; \*\*\* P < 0.001, \* P < 0.05

**Supplementary Figure S2.**

Analysis of GC>TA transversion in four groups compared common mutations (TP53/KRAS/EGFR/STK11) with corresponding wild type.