

**Supplementary Table 1. Key inclusion criteria**

- 1) Age >20 years at the date of informed consent
  - 2) Pathologically confirmed pleural malignant mesothelioma
  - 3) Advanced or metastatic malignant pleural mesothelioma that is untreated and unresectable
  - 4) A measurable lesion designated by modified RECIST criteria
  - 5) Tumor sample available to test for programmed death-ligand 1 expression
  - 6) Eastern Cooperative Oncology Group Performance Status 0 or 1
  - 7) Life expectancy is  $\geq 90$  days
  - 8) Oxygen saturation measured by pulse oximeter is  $\geq 94\%$
  - 9) Meet the defined lab criteria
  - 10) Females of child-bearing potential who agree to prevent pregnancy and lactation for at least 5 months after the last administration of nivolumab
  - 11) Males who agree to contraception for at least 7 months after the last administration of nivolumab
  - 12) Patients who understand the study information and provide written consent by their own free will
- RECIST=Response Evaluation Criteria in Solid Tumors

**Supplementary Table 2. Key exclusion criteria**

- 1) History of anaphylaxis induced by any drug
  - 2) Autoimmune disease
  - 3) Double cancer
  - 4) Metastasis to the brain or meninges
  - 5) Interstitial lung disease or pulmonary fibrosis
  - 6) Diverticulitis or peptic ulcer
  - 7) Pleural effusion that requires drainage every 2 weeks or more
  - 8) Pericardial effusion or ascites that requires drainage
  - 9) Uncontrollable cancer pain
  - 10) Transient ischemic attack, cerebrovascular accident, thrombosis, or thromboembolism within 180 days
  - 11) Uncontrollable severe cardiovascular disease
  - 12) Anticoagulant therapy
  - 13) Uncontrollable diabetes
  - 14) Receiving treatment for a systemic infection
  - 15) Obviously positive for Human Immunodeficiency Virus
  - 16) HTLV-1 antibody positive, HBs antigen positive, or HCV antibody positive. Either HBs antigen positive or HBc antibody positive and HBV-DNA detection if HBs antigen is negative.
  - 17) History of treatment for T-cell regulation
  - 18) Surgery with local or surface anesthesia within 14 days
  - 19) Surgery with general anesthesia within 28 days
  - 20) Pleurodesis within 14 days
  - 21) Pleurodesis treated with Picibanil within 28 days
  - 22) Adhesion surgery of the pericardium or peritoneum
  - 23) Radiation therapy for pain relief within 14 days
  - 24) Radiopharmaceutical therapy within 56 days
  - 25) Administration of unapproved drugs within 28 days or an unapproved antibody within 90 days
  - 26) Administration of systemic adrenal cortical hormone or immunosuppressive agents
  - 27) Females who are or may be pregnant or lactating
  - 28) Patients who are incapable of giving consent (e.g., due to dementia)
  - 29) Any other inadequacy for this study
- HTLV=human T-cell leukemia virus, HB=hepatitis B, HCV=hepatitis C virus