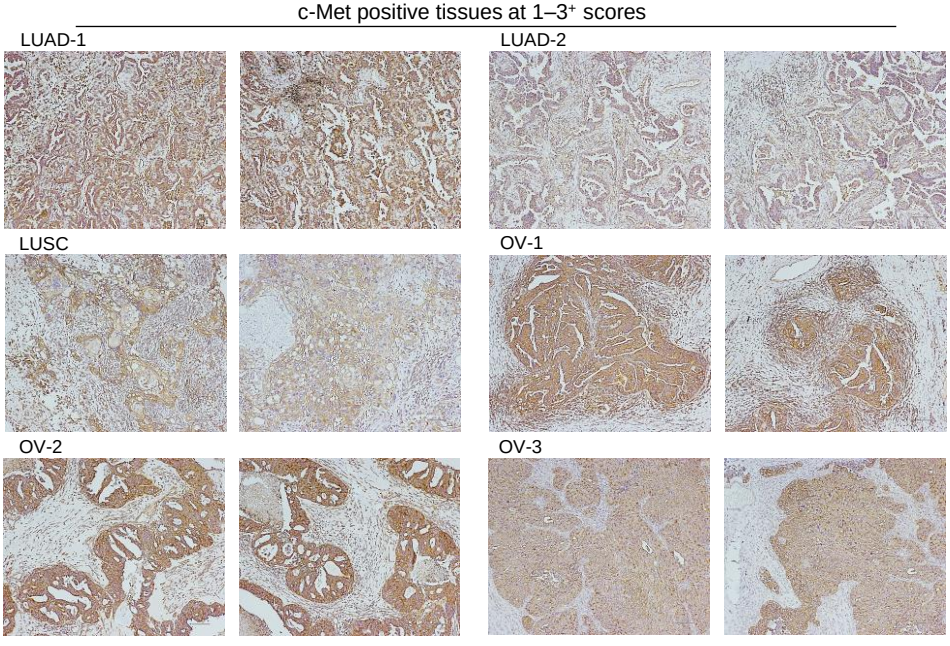
Figure S1 c-Met gene expression in tumor specimens and cell lines.

Notes: (A) c-Met-positive reactivity with cancer specimens by immunohistochemistry, including 3 lung adenocarcinoma, 2 lung squamous cell carcinoma, and 4 ovarian cancer (one representative shown in Figure 1A for each group). Adjacent tissues are stained as control. Bar:100μm; (B) c-Met binding to A549, SKOV3, HepG2 and MDA-MB-468 cells was detected by immunofluorescence staining. Red stained for c-Met, Blue for DAPI. Bar:20μm; (C) c-Met binding to A549 and SKOV3 cells with BS001 and monovalent antibody, and CD3 binding to $CD3^+CD4^+$T and $CD3^+CD8^+$T with BS001 by FACS; (D) PBMC and CD3-depleted PBMC killing activity on A549 and SKOV3 mediated by BS001 at doses of 0.0001–10 μg/mL was analyzed by LDH detection. The results were shown as mean ± SEM; (E) Flow cytometry analyses of c-Met binding to hepa1-6 and mc38 cells with BS001; (F) PBMC killing activity on 293T cells (E:T=10:1) mediated by BS001 and the monovalent c-Met antibody. The results were shown as mean ± SEM; (G) A549 cells were treated with the indicated concentrations of BS001 or the monovalent c-Met antibody for 8 h, and then stimulated with HGF (100 ng/mL) for 30 min. Total cell lysates were evaluated by Western blotting using indicated antibodies. GAPDH expression was used as an internal control.

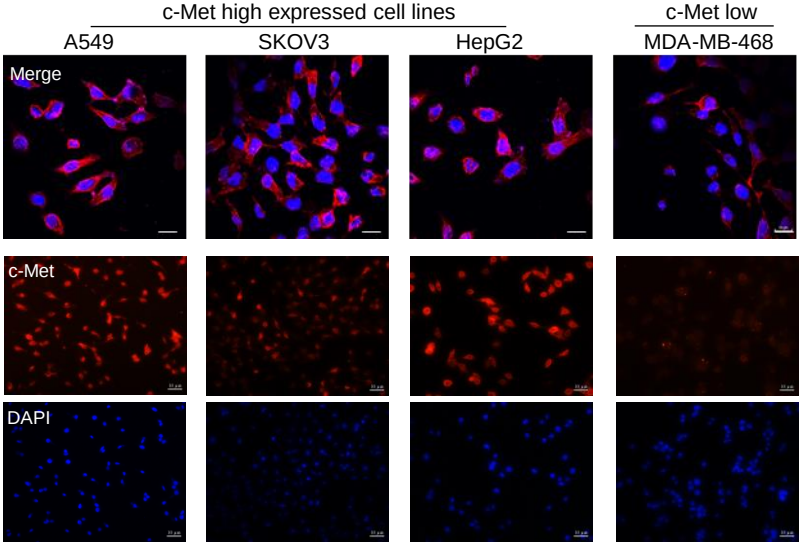
Abbreviations: DAPI, 4',6-diamidino-2-phenylindole; PBMC, peripheral blood mononuclear cell; LDH, lactate dehydrogenase; HGF, hepatocyte growth factor.

1A

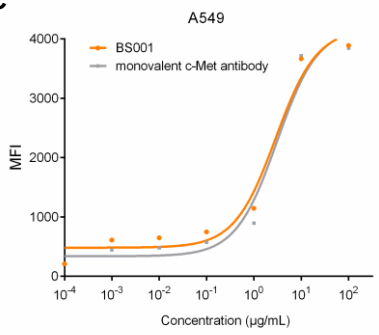
Tumor Patients	Lung adenocarcinoma(LUAD)	Lung squamous cell carcinoma (LUSC)	Ovarian cancer (OV)
Negative (<5%)			
+ (5-25%)	2	1	1
++ (25-50%)	1	1	1
+++ (>50%)			2
Total	3	2	4

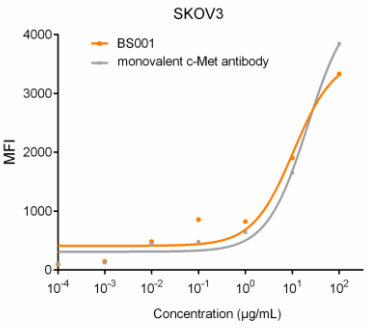


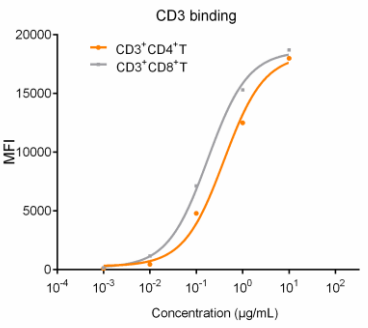
1B



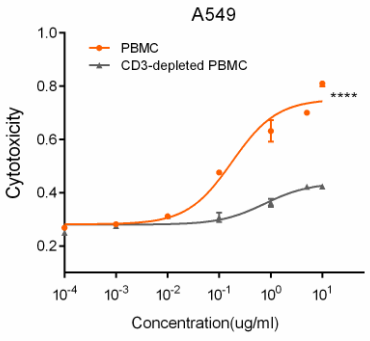
1C

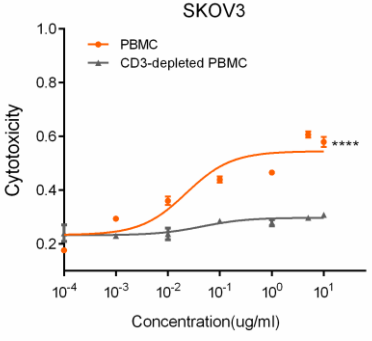

A549
BS001
monovalent c-Met antibody
MFI
Concentration (μg/mL)


SKOV3
BS001
monovalent c-Met antibody
MFI
Concentration (μg/mL)

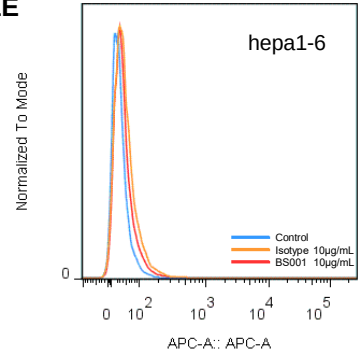

CD3 binding
CD3+CD4+T
CD3+CD8+T
MFI
Concentration (μg/mL)

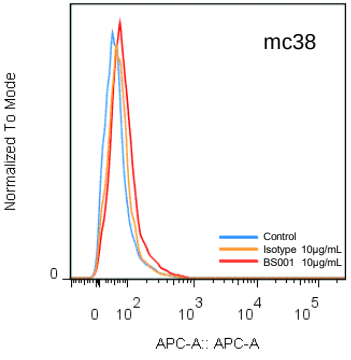
1D


A549
PBMC
CD3-depleted PBMC
Cytotoxicity
****
Concentration(ug/ml)

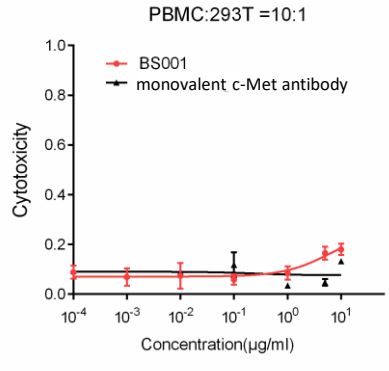

SKOV3
PBMC
CD3-depleted PBMC
Cytotoxicity
****
Concentration(ug/ml)

1E


hepa1-6
Normalized To Mode
Control
Isotype 10μg/mL
BS001 10μg/mL
APC-A:: APC-A


mc38
Normalized To Mode
Control
Isotype 10μg/mL
BS001 10μg/mL
APC-A:: APC-A

1F


PBMC:293T =10:1
BS001
monovalent c-Met antibody
Cytotoxicity
Concentration(μg/ml)

1G

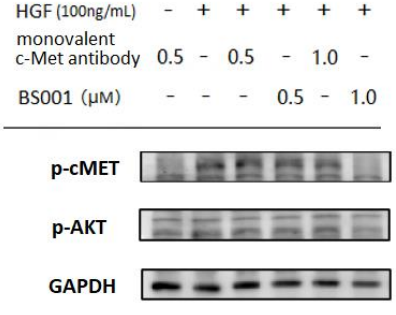
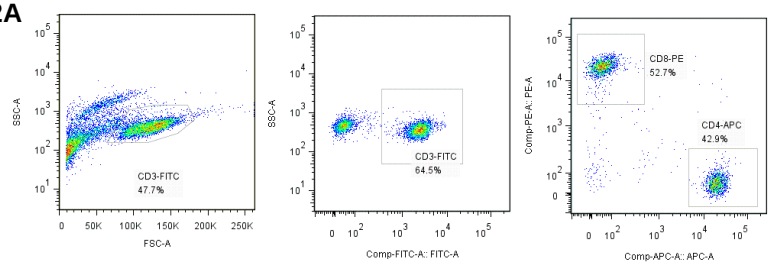

HGF (100ng/mL) - + + + + +
monovalent c-Met antibody 0.5 - 0.5 - 1.0 -
BS001 (μM) - - - 0.5 - 1.0
p-cMET
p-AKT
GAPDH

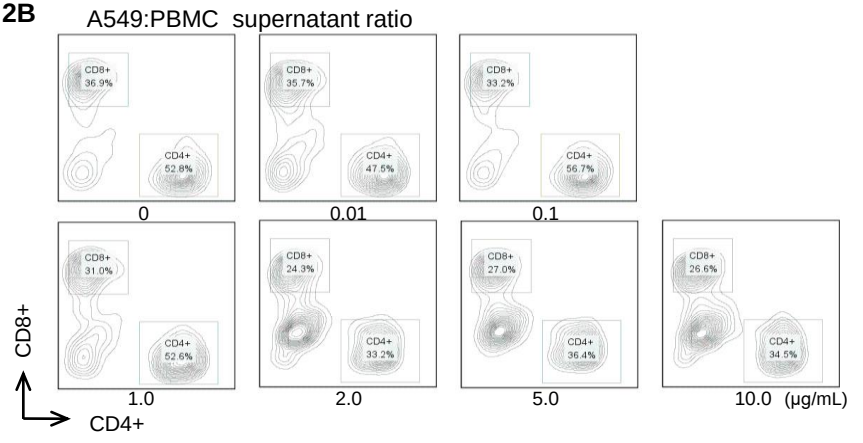
Figure S2 BS001-mediated T-cell engagement and killing of tumor cells.
Notes: (A) FACS analyses for the PBMC before the addition to the attached tumor cells as 'initial lymphocytes'; (B) Percentages of suspended CD3+T and CD8+T cells in the supernatants after co-culture at doses of 0.01–10μg/mL BS001 were determined by FACS. The percentages subtracted to the initial percentage represent the attached T cells ratio shown in Figure 3C; (C) Purity verifications of microbeads-isolated subtype T cells from donor PBMC were performed by FACS. Purity: >99% for $CD3^+$T and >90% for $CD3^+CD8^+$T.
Abbreviations: FACS, fluorescence activated cell sorting; PBMC, peripheral blood mononuclear cell.

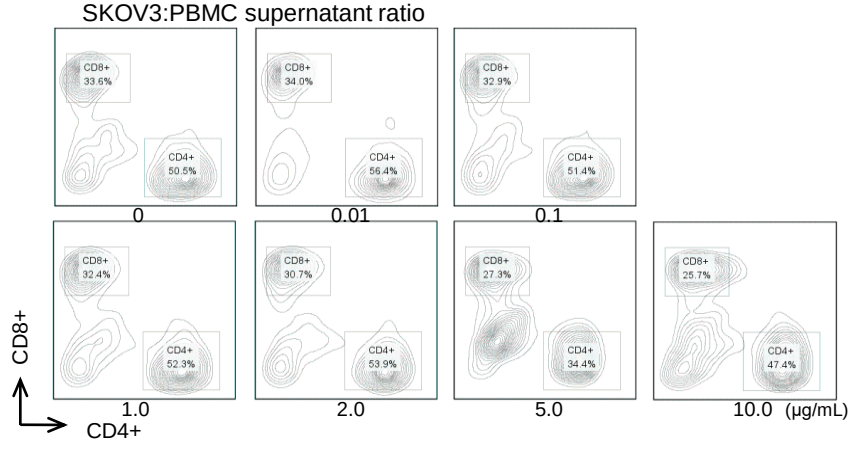
2A



Lymphocyte 47.7%
CD3+ 64.5%
CD8+/CD3+ 52.7%

2B





2C

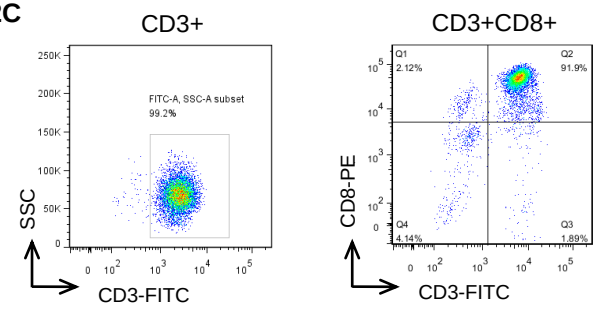
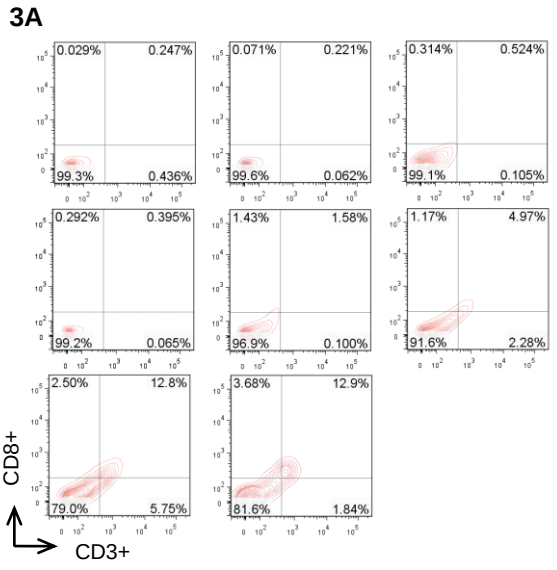
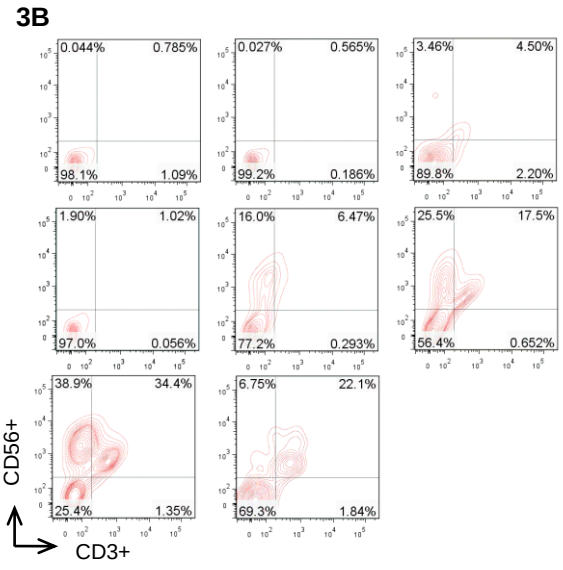


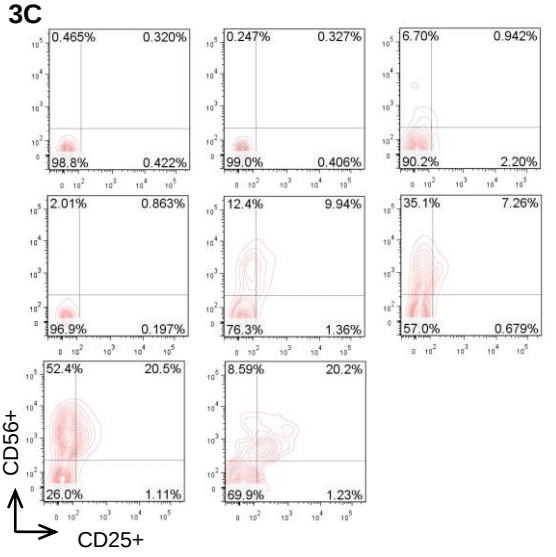
Figure S3 BS001 inhibits tumor growth in xenograft models.

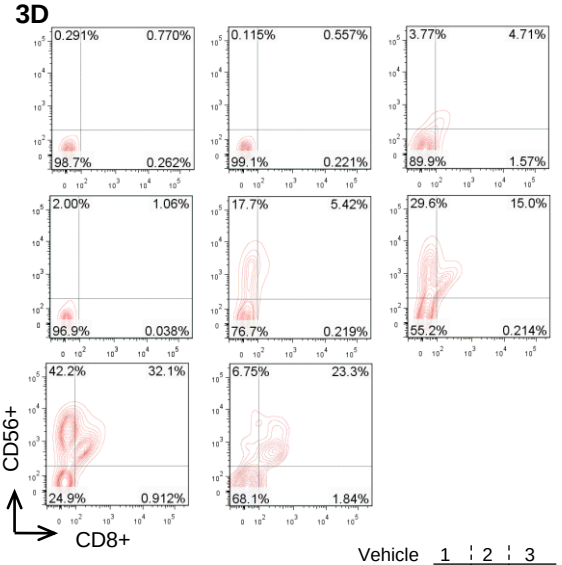
Notes: (A) Among dissected A549 tumors, $CD3^+CD8^+$T cells were detected in the 0, 4 and 10 mg/kg BS001 groups by FACS; (B,C,D) CD56-positive cells in infiltrating $CD3^+$, $CD25^+$, and $CD8^+$T cells in the above groups were detected; the results were shown individually.(E) AST/ALT levels in serum from all groups on indicated days were detected by kit. The results were shown as mean ± SEM. n.s represent no significant difference;

Abbreviations: FACS, fluorescence activated cell sorting; AST, aspartate transaminase; ALT, alanine transaminase.









Vehicle	1	2	3
4mg/kg	1	2	3
10mg/kg	1	2