**Supplementary Data for**

Whole body PET imaging of T cell response against Glioblastoma

**Supple Fig.1**. 8**9Zr-DFO-OX40 mAb PET in different time points post vaccination.**

(A) To explore the optimal timing to perform 89Zr-DFO-OX40 mAb PET post vaccination, early time point PET studies were conducted (The schedule in the main manuscript was described as late time point here, in which PET imaging was performed on day 3 post vaccination/day 1 post tracer injection). 89Zr-DFO-OX40 mAb was injected on the following day of vaccine treatment, and PET scanning was performed on day 1, 2, and 4. (B) Representative images of vaccinated and control mice in early and late time point imaging. Lymphatic organs were not visualized in both vaccinated and control groups in early time point imaging. (C) No significant difference in 89Zr-DFO-OX40 mAb uptake was seen through day 4 between vaccinated and control groups. Ax, axillary lymph node; Cer, cervical lymph node. Data are shown with mean ± SEM.

**Supple Fig.2 Calculation of Total Lesion Immune response (TLIR).**

When 3D volume of interest (VOI) was placed to include a targeted lesion (green circle), Osirix MD software automatically calculates the volume above 42% of the maximum uptake within the VOI (purple area). The threshold 42% was applied following the majority of previous clinical PET studies. TLIR was defined as mean tracer uptake within the targeted VOI multiplied by volume above 42% of maximum uptake.