

## **Supporting Information**

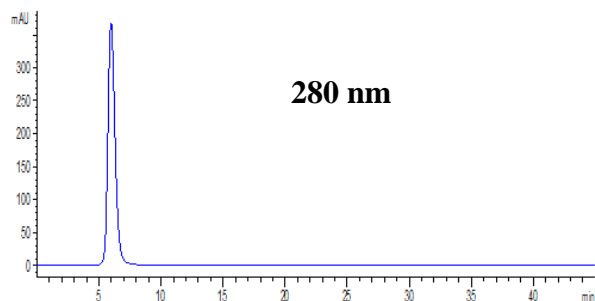
### **Table of Contents**

<b>I.</b> HPLC chromatograms of purified panitumumab conjugate (CAB-NE3TA-PAN and CAB-NE3TA-PAN-IR800) -----	2
<b>II.</b> Images of the treated and untreated mice before dissection and tumors and normal organs removed from the mice -----	3
<b>III.</b> Images of tumors removed from the mice and dehydrated and measurement of tumor weight -----	4
<b>IV.</b> <i>In vivo</i> NIR fluorescence images of A431-bearing male nude mice intraperitoneally (IP) injected with the theranostic conjugate (CAB-NE3TA-PAN-IR800) -----	4-5

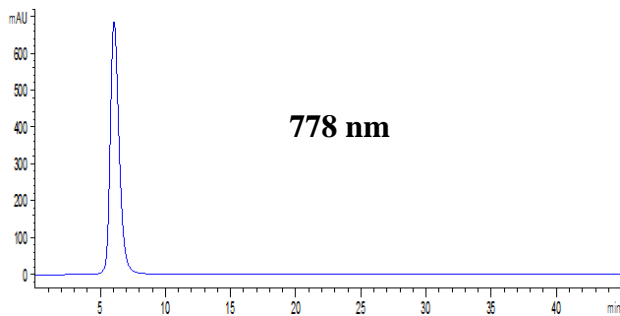
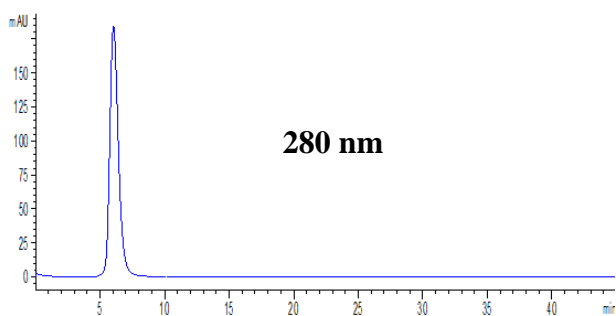
## **I. HPLC chromatograms of the purified antibody conjugates (CAB-NE3TA-PAN and CAB-NE3TA-PAN-IR800) and IR800 CW.**

The antibody conjugates were purified and characterized by analytical SE-HPLC (TSKgel G3000PW column, Tosoh Biosep) using the isocratic mobile phase (PBS, pH 7.4, 45 min, flow rate of 1 mL/min,  $\lambda = 280$  and 778 nm). CAB-NE3TA-Pan-IR800 conjugate ( $t_R = \sim 6$  min) was eluted earlier than unbound IR800 ( $t_R = \sim 13, 17$  min) at 778 nm.

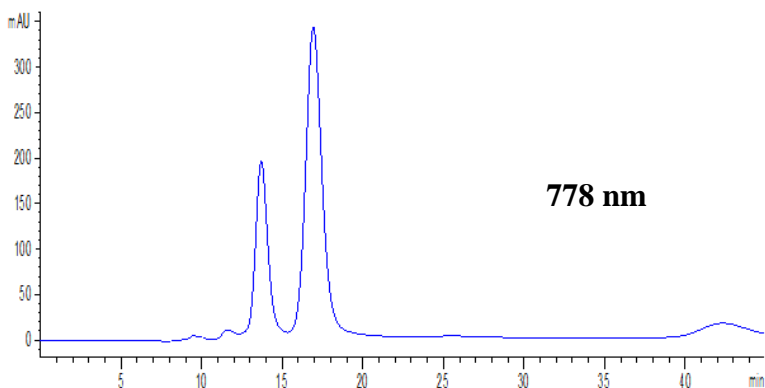
### **CAB-NE3TA-Pan**



### **CAB-NE3TA-Pan-IR800**

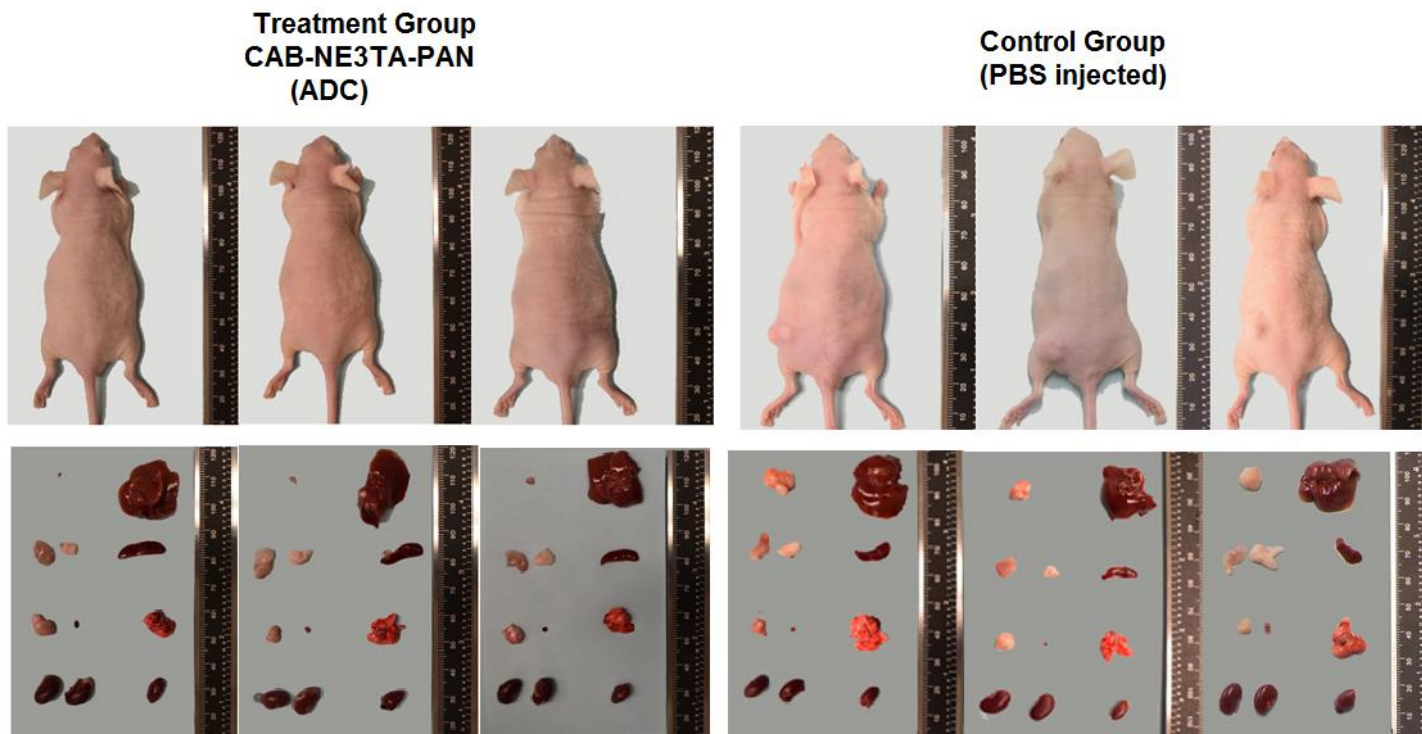


### **IR800CW**

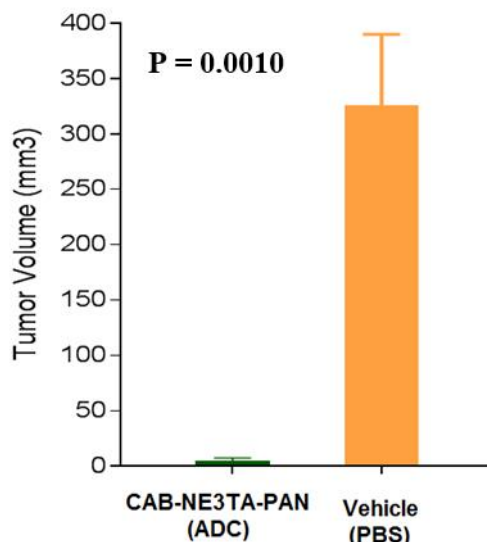


## II. Images of the treated and untreated mice before dissection and tumors and normal organs removed from the mice.

The treated mice (N = 3) were dissected at 21 days post-treatment. The control PBS group (N = 3) were dissected at 11, 16, and 20 days post-treatment). The tumors were measured with the digital caliper, and the volumes of tumors were calculated based on the formula ( $V = 0.5 \times a \times b^2$ ) and expressed as mean  $\pm$  standard deviation  $\text{mm}^3$  (SD). The data of tumor volume were analyzed by two-sided Student's t test. Difference was considered significant if p values are less than 0.05.



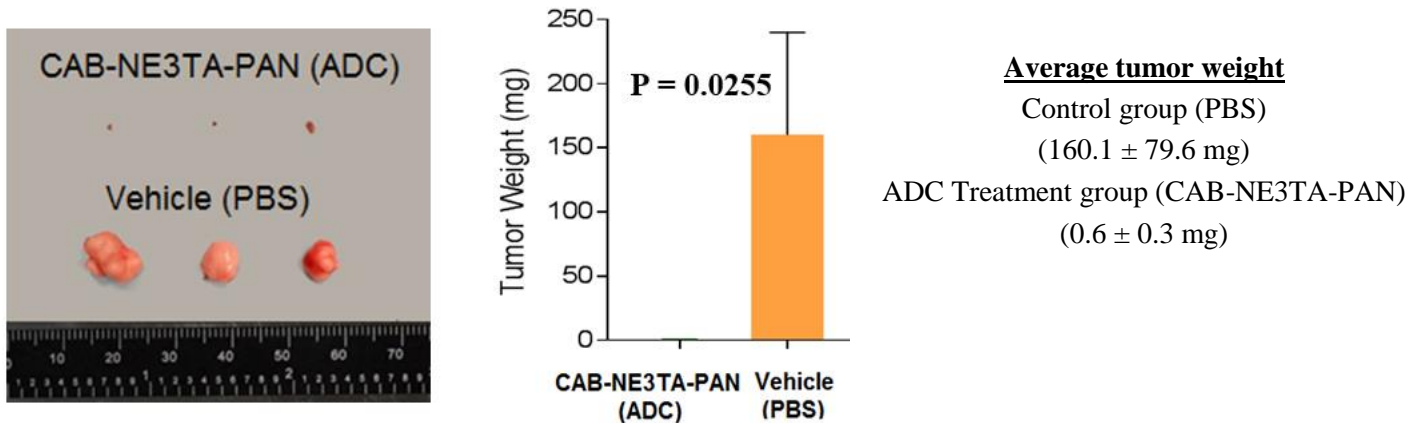
Legend	
Tumor	Liver
Muscle	Spleen
Brain	Blood
Kidneys	Lung
	Heart



**Average tumor volume**  
 Control group (PBS)  
 $(325.7 \pm 64.5 \text{ mm}^3)$   
 ADC Treatment group (CAB-NE3TA-PAN)  
 $(4.5 \pm 2.9 \text{ mm}^3)$

### III. Images of tumors removed from the mice and dehydrated and measurement of tumor weight

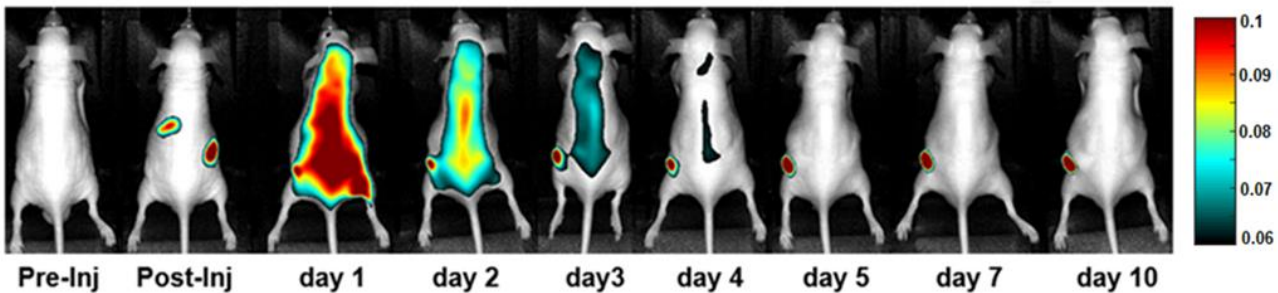
The treated mice (N = 3) were dissected at 21 days post-treatment. The control PBS group (N = 3) were dissected at 11, 16, and 20 days post-treatment. The tumors removed from the mice were frozen and dehydrated and dried under vacuum and weighed. The data of tumor weight were analyzed by two-sided Student's t test. Difference was considered significant if p values are less than 0.05.



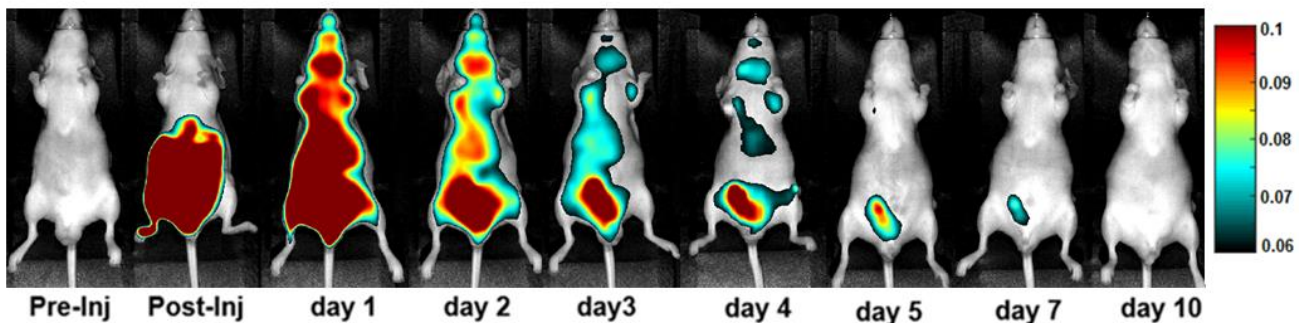
### IV. *In vivo* NIR fluorescence images of A431-bearing male nude mice intraperitoneally (IP) injected with the theranostic conjugate (CAB-NE3TA-PAN-IR800, N = 3).

#### Mouse 1

##### Dorsal

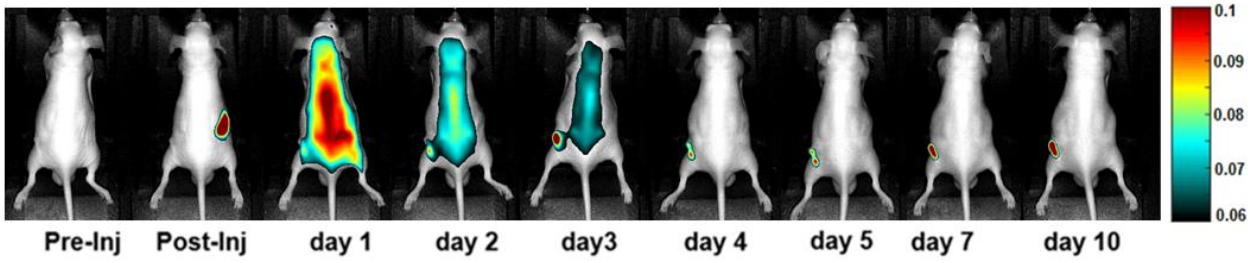


##### Ventral

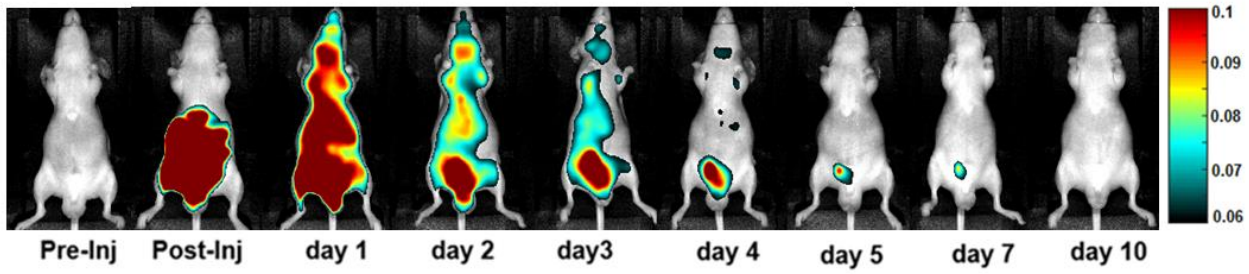


## Mouse 2

**Dorsal**

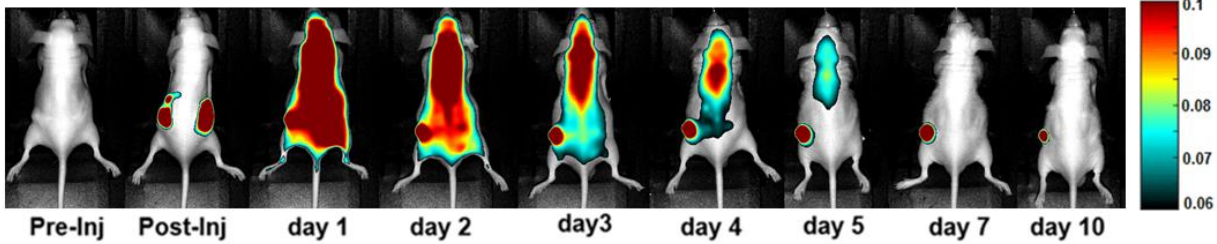


**Ventral**

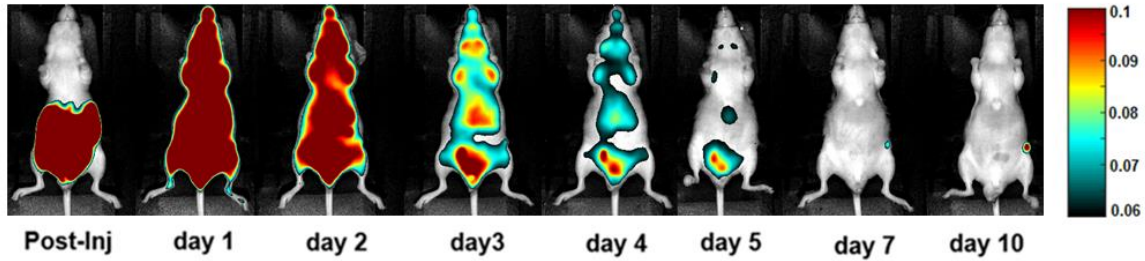


## Mouse 3

**Dorsal**



**Ventral**



**Mouse 1**

**Mouse 2**

**Mouse 3**

**Legend**

Tumor	Liver
Muscle	Spleen
Brain Blood	Lung
Kidneys	Heart

