

1 **Supporting Information**

2

3 **Supplementary figure 1**

4 Amino-acid sequences of the GMR in cynomolgus macaque and human.

5

6 **Supplementary figure 2**

7 a. Cynomolgus hGMRs expressed on M1 macrophages. Blue lines exhibit isotype and red  
8 lines exhibit CD116 expression on M1 macrophages. b. Cynomolgus hGMR-CAR-T or control  
9 T (Ctrl) cells were cocultured with cynomolgus M1 macrophages (M1) at an E:T ratio of 1:1.

10

11 **Supplementary figure 3**

12 In-house data of blood examination. Two to four-years-old healthy cynomolgus macaques  
13 housed in Ina Research Inc. from 2016 to 2019 were subjected to a blood examination to  
14 obtain the reference values. The minimum and maximum values of each parameter were  
15 determined.

16 n; number of macaques analyzed, HGB; hemoglobin, WBC; white blood cell, Mono;  
17 monocyte, Neut; neutrophil, Mono; monocyte, AST; aspartate transaminase, ALT; alanine  
18 transaminase, LDH; lactate dehydrogenase, CPK; creatine phosphokinase, CRP; C-reactive  
19 protein

20

21 **Supplementary figure 4**

22 Complete blood counts and blood chemistry of all macaques before and at the indicated  
23 days after adoptive transfer cynomolgus GMR-CAR-T cells.

24 WBC; white blood cell, Neut; neutrophil, Lym lymphocyte, Mono; monocyte, Hb;

25 hemoglobin, Retic; reticulocyte, CRP; C-reactive protein, CPK; creatine phosphokinase, LDH;

26 lactate dehydrogenase, AST; aspartate transaminase, ALT; alanine transaminase

27

28 **Supplementary figure 5**

29 Coagulation tests of all macaques before and at the indicated days after adoptive transfer

30 cynomolgus GMR-CAR-T cells.

31 PT; prothrombin time, APTT; activated partial thromboplastin time

32

33 **Supplementary table 1.**

34 There were no microscopic changes in the liver, gall bladder, kidney, spleen, heart, brain,

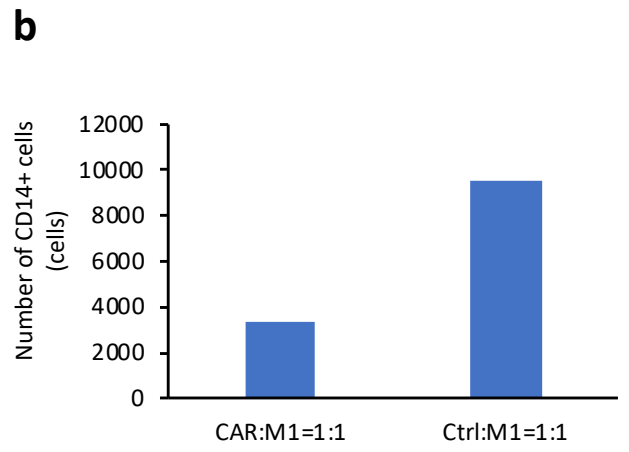
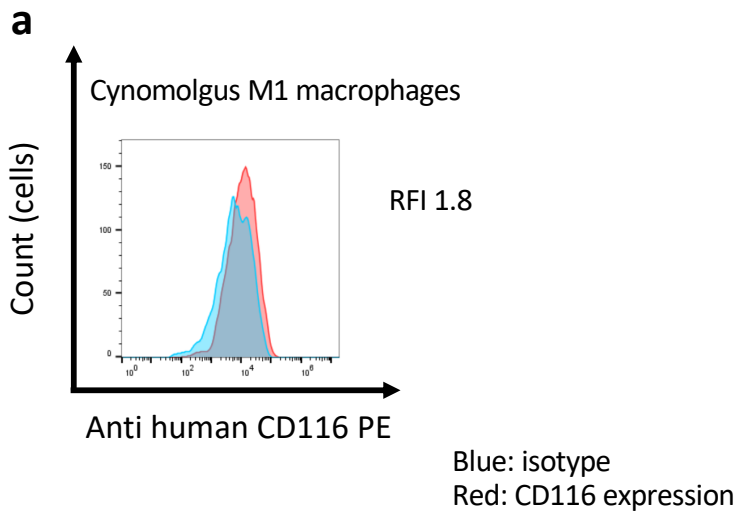
35 and thoracic spinal cord due to CAR-T cell infusion, although infiltration of cynomolgus

36 mononuclear cells was detected in the liver and kidney, and this is a normal change.

37

## Supplementary figure 1

MACACA	MWLQ <b>G</b> LLLLGTVACSI SAPARSPSP <b>G</b> TQPWEHVNAIQEARRLLNLSRD TAAEMN <b>K</b> TVEV <b>V</b>	60
_HUMAN	MWLQ <b>S</b> LLLLGTVACSI SAPARSPSP <b>S</b> TQPWEHVNAIQEARRLLNLSRD TAAEMN <b>E</b> TVEV <b>I</b>	
MACACA	SEMF DLQEP <b>S</b> CLQTRLELYKQGL <b>Q</b> GS LTKLKGPLTMMASHYKQHCPPTPETS CATQIITF	120
_HUMAN	SEMF DLQEP <b>T</b> CLQTRLELYKQGL <b>R</b> GS LTKLKGPLTMMASHYKQHCPPTPETS CATQIITF	
MACACA	<b>Q</b> SFKENLKDFLLVIPFDCWEPVQE	
_HUMAN	<b>E</b> SFKENLKDFLLVIPFDCWEPVQE	



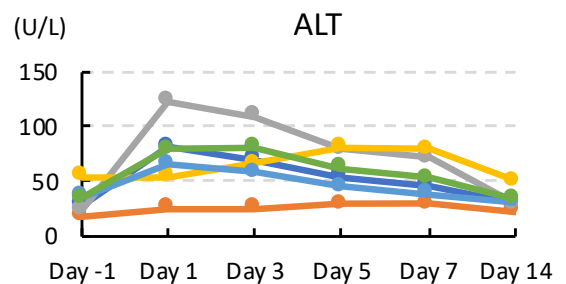
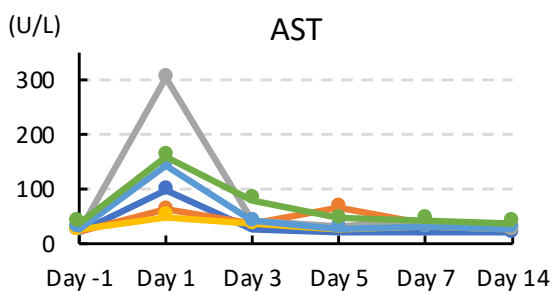
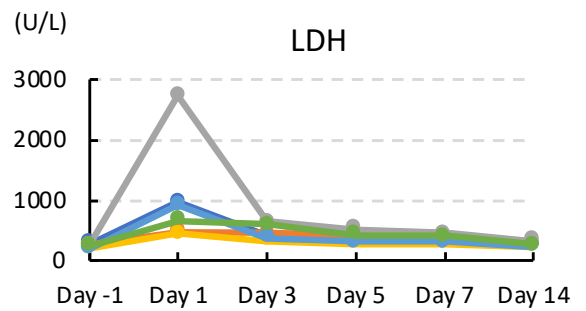
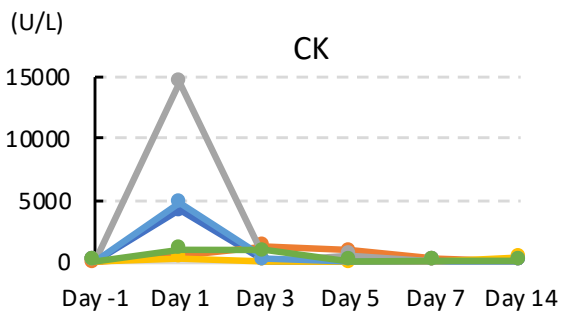
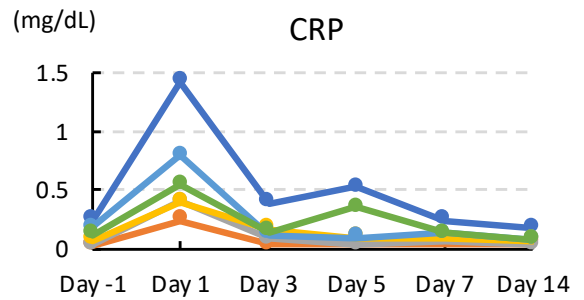
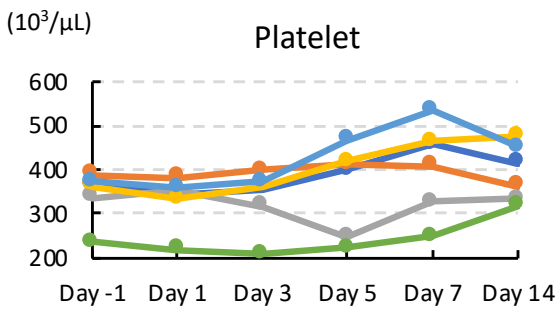
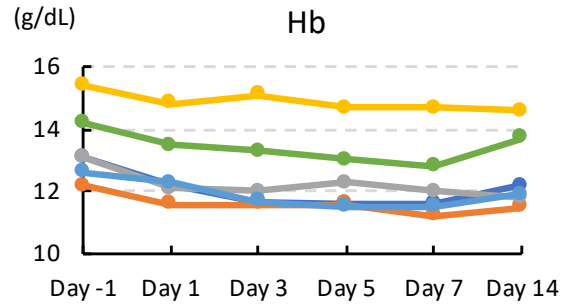
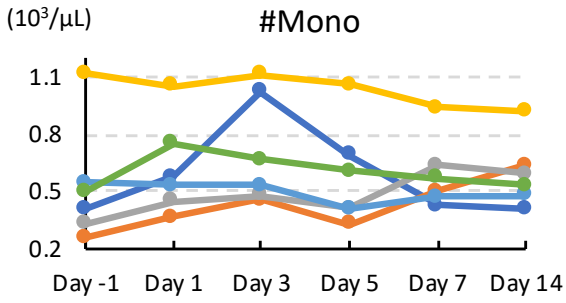
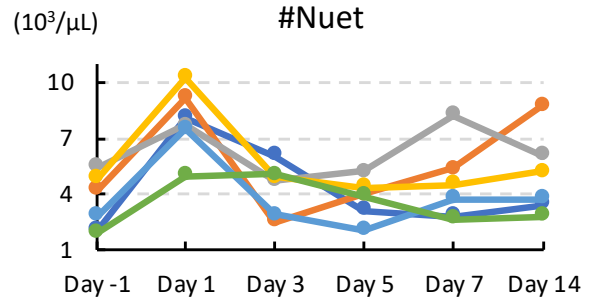
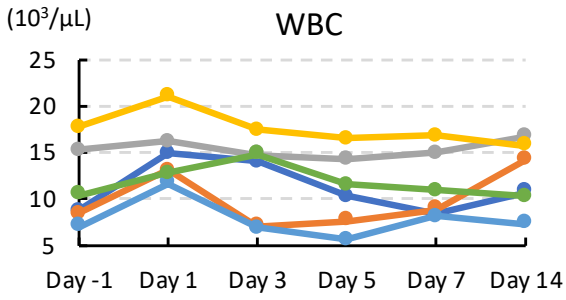
Parameters (Unit)	n	Min	Max
HGB (g/dL)	525	10.8	15.9
WBC ( $10^3/\mu\text{L}$ )	524	3.48	22.08
Neut ( $10^3/\mu\text{L}$ )	518	0.47	11.27
Mono ( $10^3/\mu\text{L}$ )	522	0.14	1.11
PLT ( $10^3/\mu\text{L}$ )	525	157	595

Parameters (Unit)	n	Min	Max
AST (U/L)	901	13	81
ALT (U/L)	902	8	122
LDH (U/L)	780	141	581
CPK (U/L)	838	58	1316
CRP (mg/dL)	93	0.01	0.64

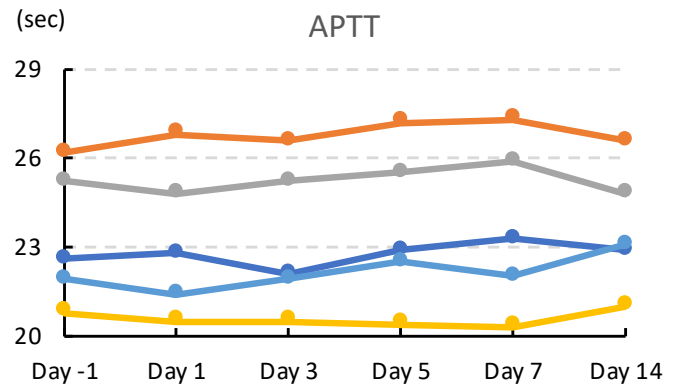
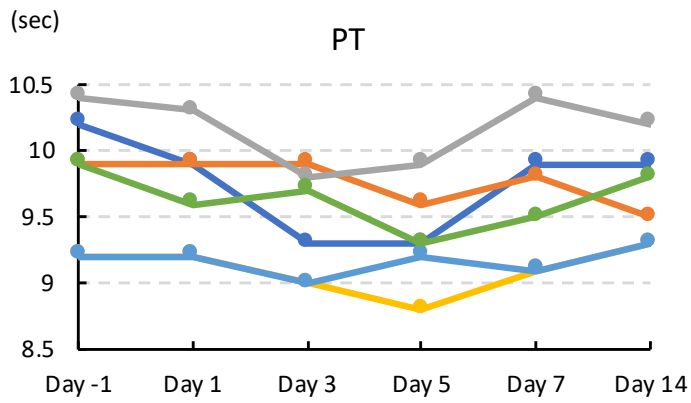
# Supplementary figure 4

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● CAR-T A   
 ● CAR-T B   
 ● CAR-T C   
 ● Ctrl D   
 ● Ctrl E   
 ● Ctrl F



● CAR-T A   
 ● CAR-T B   
 ● CAR-T C   
 ● Ctrl D   
 ● Ctrl E   
 ● Ctrl F



D-dimer (ng/mL)

	CAR-T A	CAR-T B	CAR-T C	Ctrl D	Ctrl E	Ctrl F
Day -1	<200	<200	200-500	<200	<200	<200
Day 1	<200	200-500	200-500	200-500	500<	200-500
Day 3	200-500	<200	200-500	500<	200-500	200-500
Day 5	500<	200-500	200-500	500<	200-500	<200
Day 7	200-500	200-500	200-500	500<	200-500	200-500
Day 14	<200	200-500	200-500	500<	500<	<200

Organ	Findings	Macaque		
		CAR-T A	CAR-T B	CAR-T C
Liver	<i>infiltrate, mononuclear cell</i>	minimal	minimal	-
Gallbladder	Pathological change	-	-	-
Kidney	<i>infiltrate, mononuclear cell</i>	minimal	mild	minimal
Spleen	Pathological change	-	-	-
Heart	Pathological change	-	-	-
Brain	Pathological change	-	-	-
Spinal cord (thoracic)	Pathological change	-	-	-