

M-SDR

Gene Summary

Model Description

Exon 3 of Rag2 gene was deleted to generate Rag2 knockout rat.

Research Application: immune system

*Literature published using this strain should indicate: M-SDR rats (Cat. NO. NR-KO-190001) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

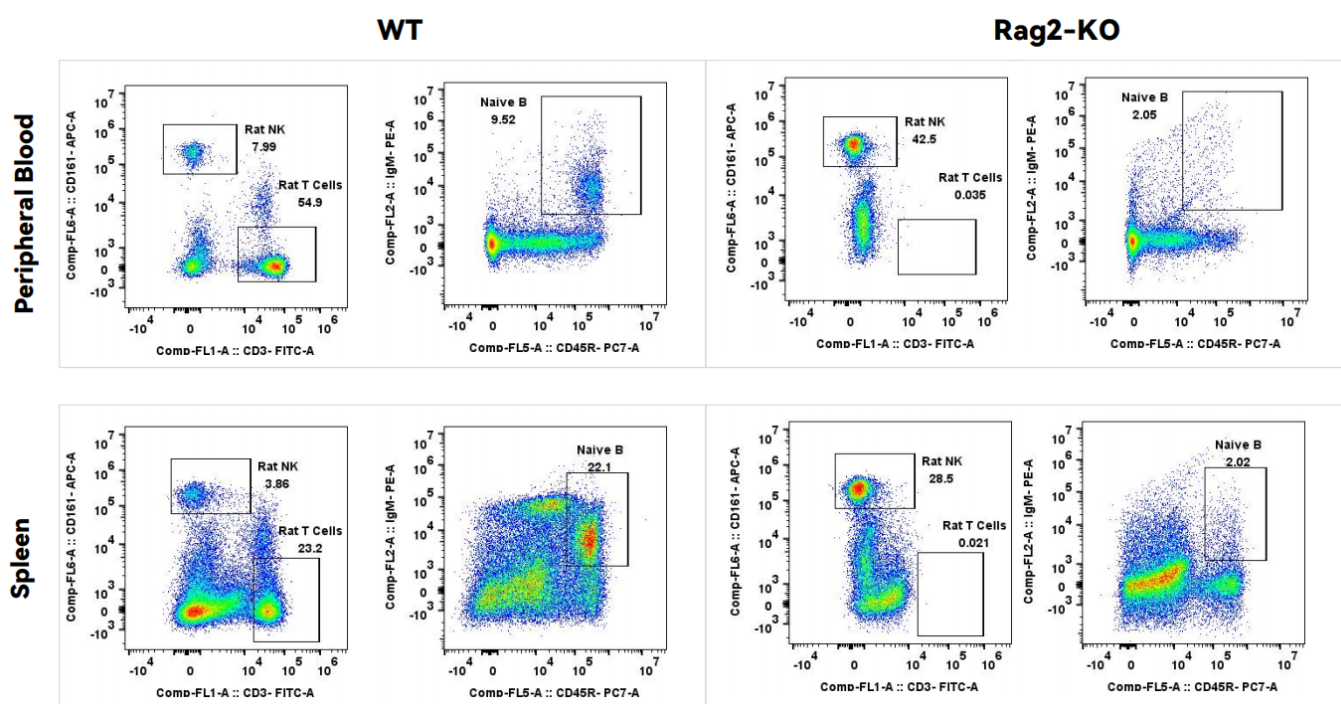


Fig1. Rag2-KO rat immunotypes analysis.

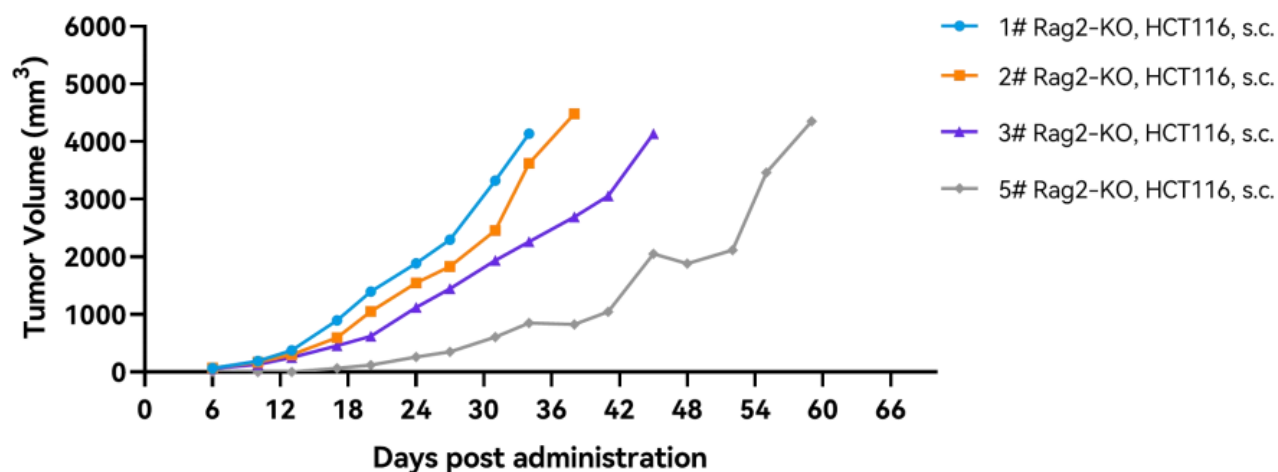


Fig2. The establishment of tumor models in Rag2-KO rats using HCT116 cells.

Parameter	Units	SD; Male	SD; Female	Rag2-KO(SD); Male	Rag2-KO(SD); Female
		7-8 weeks; n=10	7-8 weeks; n=10	7-8 weeks; n=10	7-8 weeks; n=10
WBC	10 ³ cells/ μ L	10.68 \pm 0.80	10.63 \pm 0.83	2.70 \pm 0.21	1.93 \pm 0.27
RBC	10 ⁶ cells/ μ L	7.32 \pm 0.40	6.71 \pm 0.31	6.03 \pm 0.29	5.10 \pm 0.19
HGB	g/dL	15.99 \pm 0.79	14.40 \pm 0.64	13.63 \pm 0.40	11.45 \pm 0.44
HCT	%	46.75 \pm 2.07	42.68 \pm 1.85	39.85 \pm 1.22	33.67 \pm 1.19
MCV	fL	64.12 \pm 0.69	63.73 \pm 0.55	66.70 \pm 1.39	66.05 \pm 0.48
MCH	pg	21.89 \pm 0.16	21.49 \pm 0.20	22.83 \pm 0.52	22.44 \pm 0.20
MCHC	g/dL	34.14 \pm 0.23	33.72 \pm 0.15	34.20 \pm 0.12	33.97 \pm 0.23
PLT	10 ⁶ cells/ μ L	0.82 \pm 0.13	0.57 \pm 0.13	0.96 \pm 0.16	0.85 \pm 0.15
RDW-SD	fL	29.58 \pm 1.29	27.96 \pm 0.69	47.61 \pm 1.53	35.74 \pm 1.10
RDW-CV	%	13.24 \pm 0.48	12.09 \pm 0.38	19.54 \pm 0.39	14.45 \pm 0.44
PDW	fL	8.41 \pm 0.17	9.23 \pm 0.46	8.28 \pm 0.11	8.22 \pm 0.13
MPV	fL	8.05 \pm 0.18	8.41 \pm 0.17	8.11 \pm 0.13	8.18 \pm 0.09
P-LCR	%	11.15 \pm 1.51	14.02 \pm 1.51	11.08 \pm 1.15	11.39 \pm 0.77
PCT	%	0.56 \pm 0.08	0.44 \pm 0.09	0.71 \pm 0.11	0.62 \pm 0.10
NEUT#	10 ³ cells/ μ L	1.21 \pm 0.32	0.82 \pm 0.09	0.78 \pm 0.07	0.70 \pm 0.15
LYMPH#	10 ³ cells/ μ L	8.78 \pm 0.83	9.14 \pm 0.79	1.17 \pm 0.13	0.78 \pm 0.11
MONO#	10 ³ cells/ μ L	0.61 \pm 0.09	0.59 \pm 0.07	0.68 \pm 0.06	0.35 \pm 0.03
EO#	10 ³ cells/ μ L	0.07 \pm 0.01	0.07 \pm 0.02	0.06 \pm 0.01	0.09 \pm 0.01
BASO#	10 ³ cells/ μ L	0.02 \pm 0.00	0.02 \pm 0.00	0.01 \pm 0.00	0.01 \pm 0.00
NEUT%	%	12.01 \pm 3.59	8.56 \pm 1.71	29.73 \pm 2.90	34.72 \pm 2.52
LYMPH%	%	81.67 \pm 3.58	85.29 \pm 1.74	42.79 \pm 3.23	40.18 \pm 1.55
MONO%	%	5.50 \pm 0.44	5.41 \pm 0.54	24.93 \pm 0.91	19.65 \pm 1.37
EO%(%)	%	0.67 \pm 0.14	0.60 \pm 0.11	2.32 \pm 0.33	5.26 \pm 0.54
BASO%	%	0.15 \pm 0.02	0.14 \pm 0.02	0.23 \pm 0.07	0.19 \pm 0.12
RET#	10 ⁶ cells/ μ L	0.46 \pm 0.06	0.41 \pm 0.04	0.60 \pm 0.03	0.46 \pm 0.03
RET%	%	6.78 \pm 1.10	6.31 \pm 0.57	10.06 \pm 0.39	9.10 \pm 0.38
LFR(%)	%	53.65 \pm 7.53	45.62 \pm 5.63	33.85 \pm 0.94	38.23 \pm 1.97
MFR(%)	%	11.88 \pm 1.24	14.12 \pm 0.64	14.45 \pm 0.44	14.35 \pm 0.73
HFR(%)	%	34.47 \pm 6.69	40.26 \pm 5.16	51.70 \pm 1.29	47.42 \pm 2.27
IRF(%)	%	46.35 \pm 7.53	54.38 \pm 5.63	66.15 \pm 0.94	61.77 \pm 1.97

Fig3. Blood Routine Tests in Rag2-KO(SD) rats.

Parameter	Units	SD; Male	SD; Female	Rag2-KO(SD); Male	Rag2-KO(SD); Female
		7-8 weeks; n=10	7-8 weeks; n=10	7-8 weeks; n=10	7-8 weeks; n=10
ALB	g/L	28.10±0.82	30.40±0.45	29.70±0.50	32.10±0.78
ALP	U/L	1470.00±105.85	961.60±62.60	1040.70±38.49	559.80±67.48
ALT	U/L	46.50±2.95	43.50±3.18	45.50±2.11	50.70±2.47
AST	U/L	142.70±7.26	139.70±7.71	150.10±9.91	217.80±15.82
GGT	U/L	0.16±0.08	0.39±0.11	0.42±0.30	0.71±0.45
T-BIL	μmol/L	1.22±0.28	0.75±0.09	1.75±0.19	0.60±0.10
TP	g/L	59.30±1.40	62.90±1.22	59.80±1.08	60.90±1.27
CRE	μmol/L	21.34±0.72	20.18±0.76	21.78±0.61	27.92±0.88
BUN	mmol/L	6.28±0.36	5.76±0.25	6.04±0.17	5.25±0.20
TCHO	mmol/L	1.93±0.05	2.00±0.09	2.39±0.06	1.88±0.08
TG	mmol/L	1.73±0.28	0.69±0.10	1.36±0.21	0.39±0.04
HDL	mmol/L	1.14±0.05	1.39±0.06	1.60±0.06	1.31±0.06
LDL	mmol/L	0.67±0.09	0.63±0.04	0.62±0.02	1.27±0.05
NEFA	mmol/L	0.72±0.15	0.72±0.11	0.95±0.07	0.63±0.09
Ca	mmol/L	3.14±0.04	3.07±0.03	3.18±0.03	2.64±0.30
CL	mmol/L	96.29±1.12	96.83±0.84	96.25±0.43	64.61±2.34
IP	mmol/L	3.28±0.17	2.82±0.14	3.05±0.14	3.13±0.14
K	mmol/L	7.07±0.27	6.09±0.20	6.45±0.13	8.32±2.17
Na	mmol/L	144.01±4.40	159.32±2.79	159.67±3.66	122.12±4.25
CK	U/L	1880.30±182.21	1317.70±159.22	1236.00±179.68	2336.30±302.34
GLU	mmol/L	8.73±0.69	6.67±0.20	6.83±0.22	8.01±0.35

Fig4. Blood biochemistry in Rag2-KO(SD) rats.