

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

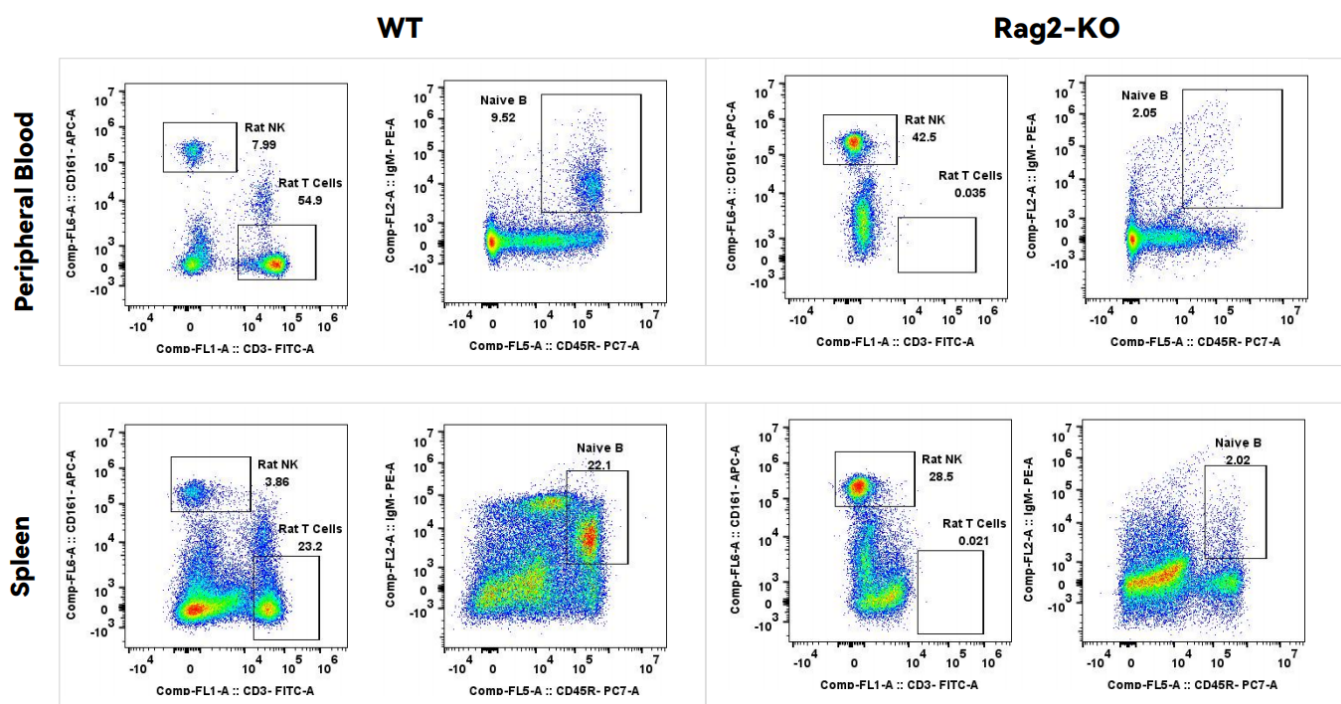


Fig1. Rag2-KO rat immunotypes analysis.

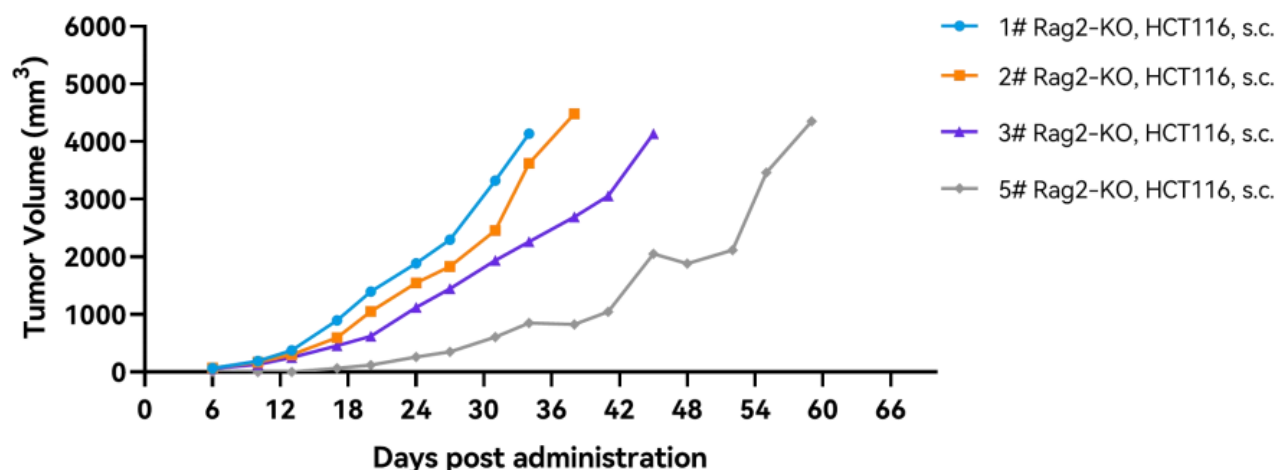


Fig2. The establishment of tumor models in Rag2-KO rats using HCT116 cells.

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