

M-SRG

Gene Summary

Gene Symbol

Synonyms

Rag-2;gc; p64; [g]c; CD132; gamma©

NCBI ID

[295953](#)

RGD ID

Ensembl ID

[ENSRNOG00000004623](#)

Pubmed

Model Description

Exon 2-7 of IL2rg gene in Rag2-KO(SD) rat were deleted to generate Rag2 and IL2rg knockout rat.

*Literature published using this strain should indicate: M-SRG rats (Cat. NO. NR-KO-210360) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

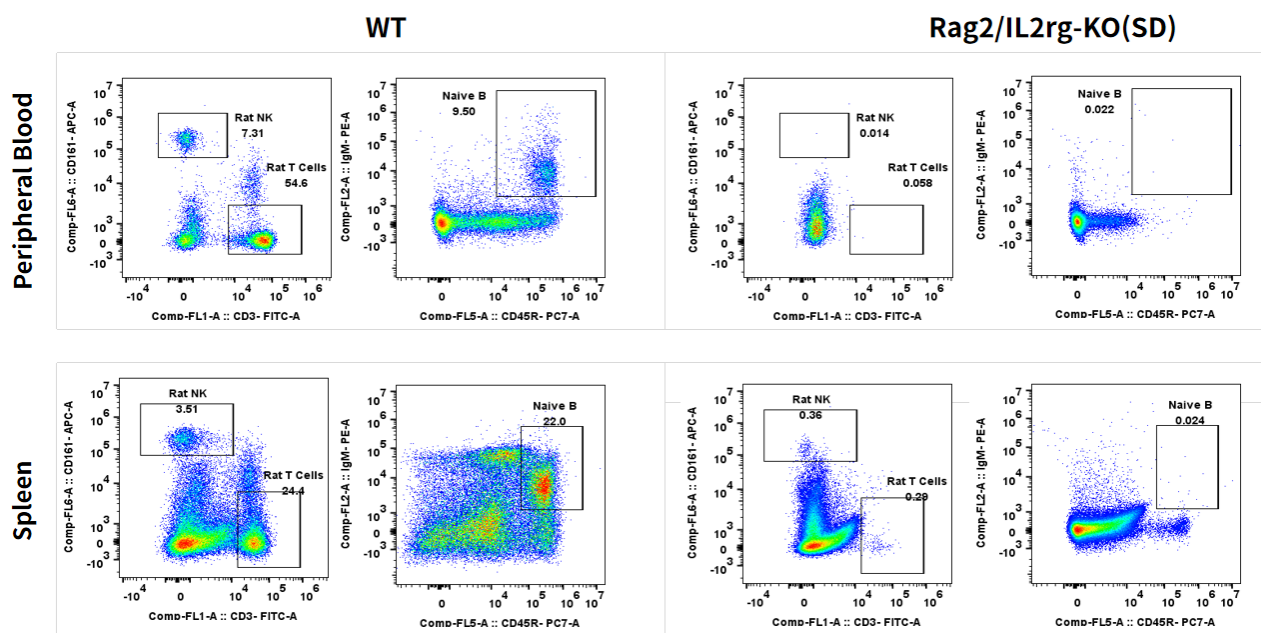


Fig1. Complete deletion of T, B and NK cells of M-SRG rats. Spleen and peripheral blood cells from SD and M-SRG rats were collected to analyze their compositions of T, B and NK cells by FACS.

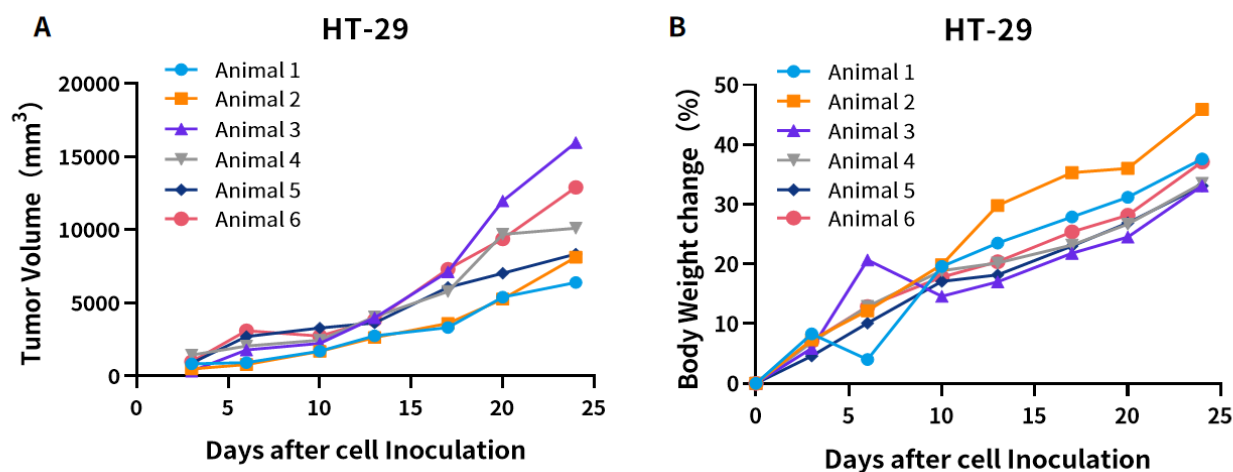


Fig2. Subcutaneous xenograft tumor growth of HT29 cells in M-SRG rats. Human colorectal adenocarcinoma cell line HT-29 (2×10^7) were mixed with Matrigel and inoculated subcutaneously into M-SRG rats ($n=6$). (A) Tumor volume. (B) Body weight change.

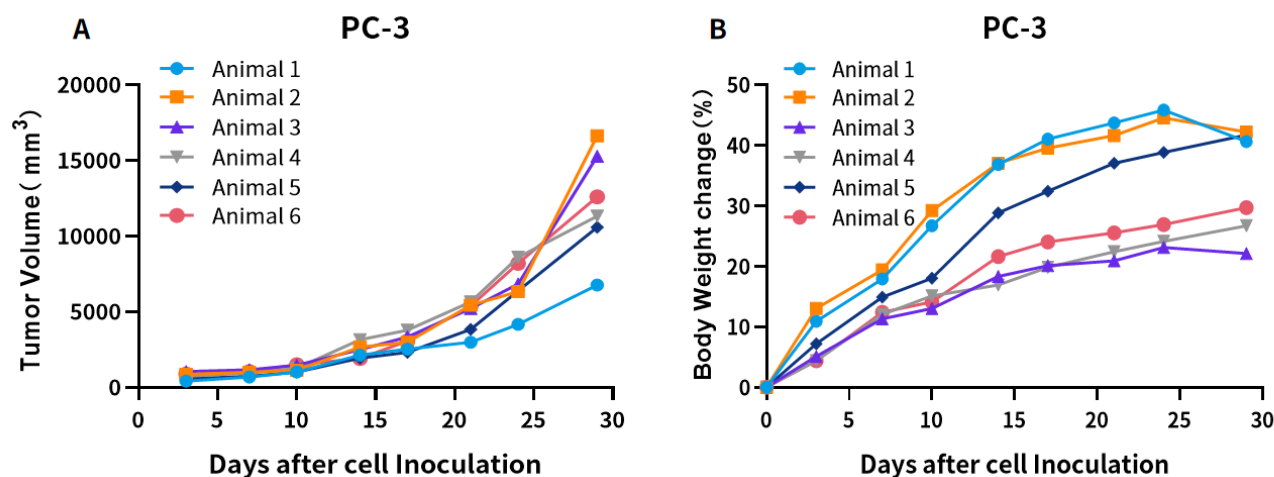


Fig3. Subcutaneous xenograft tumor growth of PC-3 cells in M-SRG rats. Human prostatic adenocarcinoma cell line PC-3 (2×10^7) were mixed with Matrigel and inoculated subcutaneously into M-SRG rats ($n=6$). (A) Tumor volume. (B) Body weight change.

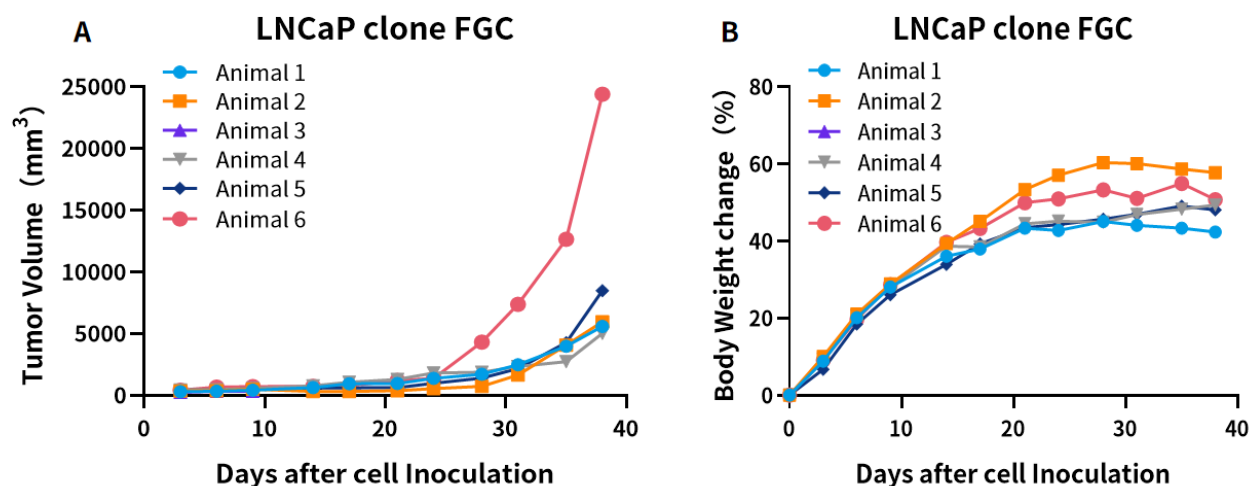


Fig4. Subcutaneous xenograft tumor growth of LNCaP clone FGC cells in M-SRG rats. Human metastatic prostate carcinoma cell line LNCaP clone FGC (2×10^7) were mixed with Matrigel and inoculated subcutaneously into M-SRG rats ($n=6$). (A) Tumor volume. (B) Body weight change.

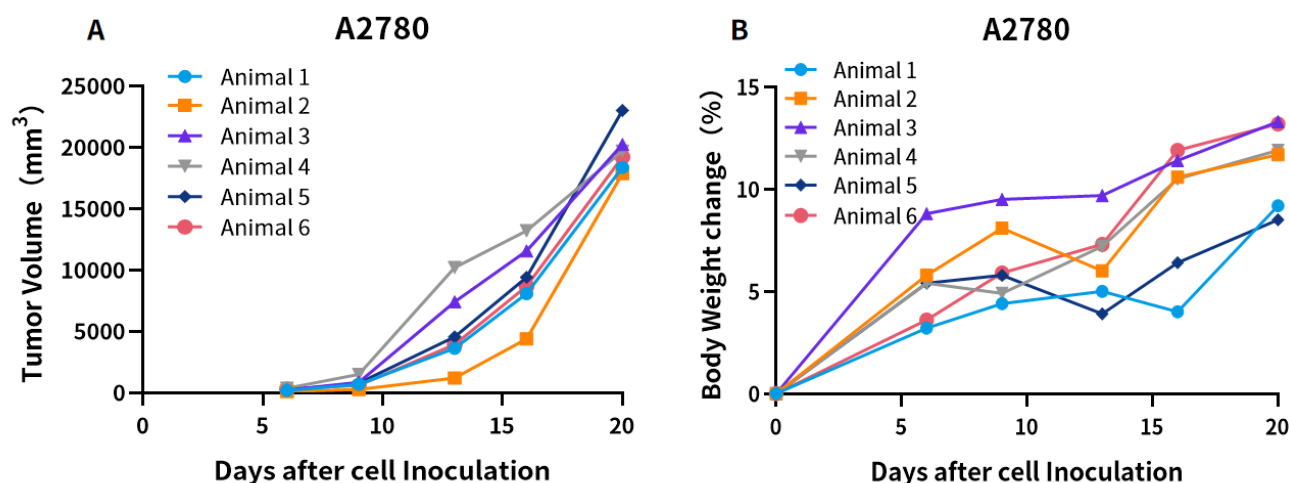


Fig5. Subcutaneous xenograft tumor growth of A2780 cells in M-SRG rats. Human ovarian cancer cell line HT-29 (1×10^7) were mixed with Matrigel and inoculated subcutaneously into M-SRG rats ($n=6$). (A) Tumor volume. (B) Body weight change.

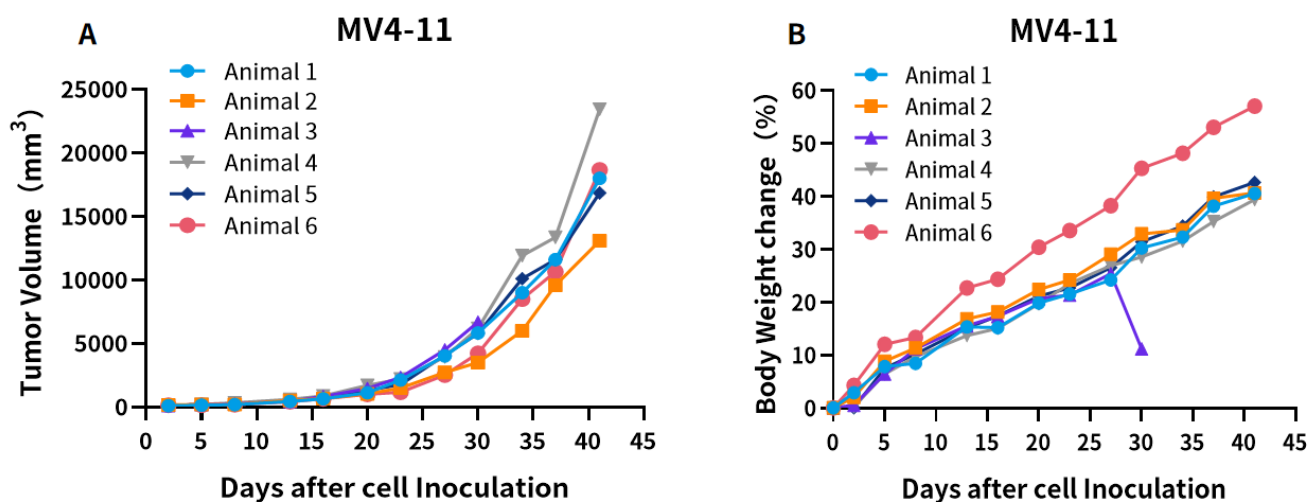


Fig6. Subcutaneous xenograft tumor growth of MV4-11 cells in M-SRG rats. Human monocytic leukemia cell line MV4-11 (1×10^7) were mixed with Matrigel and inoculated subcutaneously into M-SRG rats ($n=6$). (A) Tumor volume. (B) Body weight change.

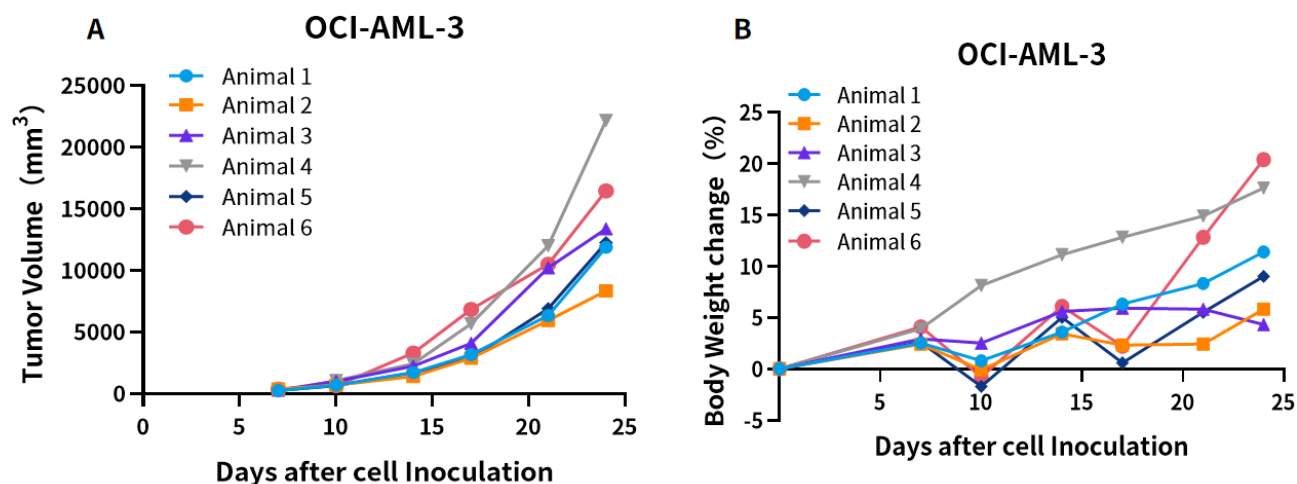


Fig7. Subcutaneous xenograft tumor growth of OCI-AML-3 cells in M-SRG rats. Human acute myeloid leukemia cell line OCI-AML-3 (1×10^7) were mixed with Matrigel and inoculated subcutaneously into M-SRG rats ($n=6$). (A) Tumor volume. (B) Body weight change.

Parameter	Units	SD; Male	SD; Female	Rag2/Il2rg-KO(SD); Male	Rag2/Il2rg-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	2.70 $\pm$ 0.21	1.93 $\pm$ 0.27	2.14 $\pm$ 0.18	1.62 $\pm$ 0.09
RBC	10 ⁶ cells/ μ L	6.03 $\pm$ 0.29	5.10 $\pm$ 0.19	6.99 $\pm$ 0.24	6.23 $\pm$ 0.24
HGB	g/dL	13.63 $\pm$ 0.40	11.45 $\pm$ 0.44	15.30 $\pm$ 0.34	13.03 $\pm$ 0.29
HCT	%	39.85 $\pm$ 1.22	33.67 $\pm$ 1.19	45.00 $\pm$ 0.89	38.35 $\pm$ 0.94
MCV	fL	66.70 $\pm$ 1.39	66.05 $\pm$ 0.48	64.80 $\pm$ 1.53	61.97 $\pm$ 1.44
MCH	pg	22.83 $\pm$ 0.52	22.44 $\pm$ 0.20	22.02 $\pm$ 0.53	21.08 $\pm$ 0.56
MCHC	g/dL	34.20 $\pm$ 0.12	33.97 $\pm$ 0.23	33.98 $\pm$ 0.15	34.00 $\pm$ 0.16
PLT	10 ⁶ cells/ μ L	0.96 $\pm$ 0.16	0.85 $\pm$ 0.15	1.00 $\pm$ 0.16	1.20 $\pm$ 0.13
RDW-SD	fL	47.61 $\pm$ 1.53	35.74 $\pm$ 1.10	45.74 $\pm$ 2.36	37.35 $\pm$ 1.67
RDW-CV	%	19.54 $\pm$ 0.39	14.45 $\pm$ 0.44	19.97 $\pm$ 0.43	16.90 $\pm$ 0.45
PDW	fL	8.28 $\pm$ 0.11	8.22 $\pm$ 0.13	9.35 $\pm$ 0.25	8.75 $\pm$ 0.10
MPV	fL	8.11 $\pm$ 0.13	8.18 $\pm$ 0.09	8.65 $\pm$ 0.22	8.21 $\pm$ 0.06
P-LCR	%	11.08 $\pm$ 1.15	11.39 $\pm$ 0.77	16.42 $\pm$ 2.00	11.75 $\pm$ 0.46
PCT	%	0.71 $\pm$ 0.11	0.62 $\pm$ 0.10	0.91 $\pm$ 0.14	0.97 $\pm$ 0.09
NEUT#	10 ³ cells/ μ L	0.78 $\pm$ 0.07	0.70 $\pm$ 0.15	0.61 $\pm$ 0.07	0.85 $\pm$ 0.11
LYMPH#	10 ³ cells/ μ L	1.17 $\pm$ 0.13	0.78 $\pm$ 0.11	0.98 $\pm$ 0.13	0.37 $\pm$ 0.08
MONO#	10 ³ cells/ μ L	0.68 $\pm$ 0.06	0.35 $\pm$ 0.03	0.51 $\pm$ 0.05	0.37 $\pm$ 0.04
EO#	10 ³ cells/ μ L	0.06 $\pm$ 0.01	0.09 $\pm$ 0.01	0.03 $\pm$ 0.01	0.03 $\pm$ 0.01
BASO#	10 ³ cells/ μ L	0.01 $\pm$ 0.00	0.01 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
NEUT%	%	29.73 $\pm$ 2.90	34.72 $\pm$ 2.52	30.25 $\pm$ 4.16	52.03 $\pm$ 5.93
LYMPH%	%	42.79 $\pm$ 3.23	40.18 $\pm$ 1.55	44.18 $\pm$ 4.09	23.48 $\pm$ 5.26
MONO%	%	24.93 $\pm$ 0.91	19.65 $\pm$ 1.37	23.92 $\pm$ 0.90	22.53 $\pm$ 1.83
EO%(%)	%	2.32 $\pm$ 0.33	5.26 $\pm$ 0.54	1.37 $\pm$ 0.29	1.82 $\pm$ 0.41
BASO%	%	0.23 $\pm$ 0.07	0.19 $\pm$ 0.12	0.28 $\pm$ 0.10	0.14 $\pm$ 0.09
RET#	10 ⁶ cells/ μ L	0.60 $\pm$ 0.03	0.46 $\pm$ 0.03	0.63 $\pm$ 0.03	0.46 $\pm$ 0.02
RET%	%	10.06 $\pm$ 0.39	9.10 $\pm$ 0.38	9.22 $\pm$ 0.64	7.57 $\pm$ 0.52
LFR(%)	%	33.85 $\pm$ 0.94	38.23 $\pm$ 1.97	40.47 $\pm$ 1.50	39.05 $\pm$ 1.30
MFR(%)	%	14.45 $\pm$ 0.44	14.35 $\pm$ 0.73	13.87 $\pm$ 0.26	13.32 $\pm$ 0.40
HFR(%)	%	51.70 $\pm$ 1.29	47.42 $\pm$ 2.27	45.66 $\pm$ 1.39	47.63 $\pm$ 1.50
IRF(%)	%	66.15 $\pm$ 0.94	61.77 $\pm$ 1.97	59.53 $\pm$ 1.50	60.95 $\pm$ 1.30

Fig8. Blood Routine Tests in M-SRG rats.

Parameter	Units	SD; Male	SD; Female	Rag2/Il2rg-KO(SD); Male	Rag2/Il2rg-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 $\pm$ 0.82	30.40 $\pm$ 0.45	35.40 $\pm$ 0.60	35.10 $\pm$ 1.10
ALP	U/L	1470.00 $\pm$ 105.85	961.60 $\pm$ 62.60	1131.00 $\pm$ 56.23	783.30 $\pm$ 37.81
ALT	U/L	46.50 $\pm$ 2.95	43.50 $\pm$ 3.18	63.90 $\pm$ 7.00	74.40 $\pm$ 5.42
AST	U/L	142.70 $\pm$ 7.26	139.70 $\pm$ 7.71	223.20 $\pm$ 17.54	162.60 $\pm$ 8.11
GGT	U/L	0.16 $\pm$ 0.08	0.39 $\pm$ 0.11	0.28 $\pm$ 0.20	0.13 $\pm$ 0.04
T-BIL	μ mol/L	1.22 $\pm$ 0.28	0.75 $\pm$ 0.09	1.44 $\pm$ 0.19	0.91 $\pm$ 0.11
TP	g/L	59.30 $\pm$ 1.40	62.90 $\pm$ 1.22	69.60 $\pm$ 1.60	65.70 $\pm$ 2.21
CRE	μ mol/L	21.34 $\pm$ 0.72	20.18 $\pm$ 0.76	23.91 $\pm$ 0.45	26.69 $\pm$ 1.02
BUN	mmol/L	6.28 $\pm$ 0.36	5.76 $\pm$ 0.25	6.60 $\pm$ 0.26	5.16 $\pm$ 0.23
TCHO	mmol/L	1.93 $\pm$ 0.05	2.00 $\pm$ 0.09	2.25 $\pm$ 0.10	2.24 $\pm$ 0.11
TG	mmol/L	1.73 $\pm$ 0.28	0.69 $\pm$ 0.10	0.70 $\pm$ 0.09	0.41 $\pm$ 0.04
HDL	mmol/L	1.14 $\pm$ 0.05	1.39 $\pm$ 0.06	1.69 $\pm$ 0.08	1.58 $\pm$ 0.07
LDL	mmol/L	0.67 $\pm$ 0.09	0.63 $\pm$ 0.04	1.34 $\pm$ 0.06	1.30 $\pm$ 0.02
NEFA	mmol/L	0.72 $\pm$ 0.15	0.72 $\pm$ 0.11	1.03 $\pm$ 0.14	0.74 $\pm$ 0.04
Ca	mmol/L	3.14 $\pm$ 0.04	3.07 $\pm$ 0.03	3.19 $\pm$ 0.05	3.16 $\pm$ 0.06
CL	mmol/L	96.29 $\pm$ 1.12	96.83 $\pm$ 0.84	66.62 $\pm$ 1.37	63.48 $\pm$ 1.31
IP	mmol/L	3.28 $\pm$ 0.17	2.82 $\pm$ 0.14	3.90 $\pm$ 0.11	3.57 $\pm$ 0.19
K	mmol/L	7.07 $\pm$ 0.27	6.09 $\pm$ 0.20	8.07 $\pm$ 0.28	7.39 $\pm$ 0.36
Na	mmol/L	144.01 $\pm$ 4.40	159.32 $\pm$ 2.79	116.43 $\pm$ 6.66	125.36 $\pm$ 5.53
CK	U/L	1880.30 $\pm$ 182.21	1317.70 $\pm$ 159.22	2218.33 $\pm$ 244.28	1935.90 $\pm$ 259.94
GLU	mmol/L	8.73 $\pm$ 0.69	6.67 $\pm$ 0.20	7.00 $\pm$ 0.57	7.83 $\pm$ 0.39

Fig9. Blood biochemistry in M-SRG rats.