



南模生物
SHANGHAI
MODEL ORGANISMS

科创板代码
688265

编辑基因 解码生命

NOD SCID

Cat. NO.: SM-019



品系全名:NOD.Cg-*Prkdc*^{scid}/NifdcSmoc

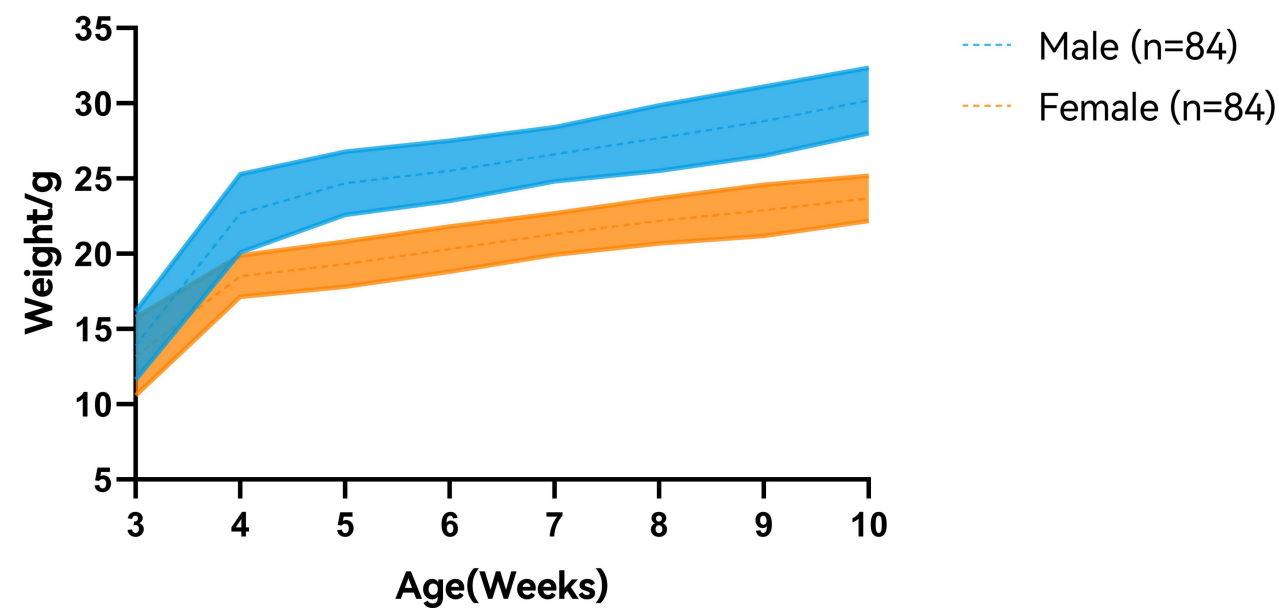
目录号:SM-019

品系状态:活体

品系描述:该品系为非肥胖糖尿病（NOD）小鼠背景携带Scid自发突变，NOD SCID小鼠不会发生糖尿病，缺乏T细胞和B细胞，同时具备固有免疫缺陷。NOD SCID小鼠适合移植的细胞系种类较裸鼠更多；适用于部分PDX模型的移植；自发胸腺淋巴瘤，寿命短(约为8-9个月)，不适合长期实验。

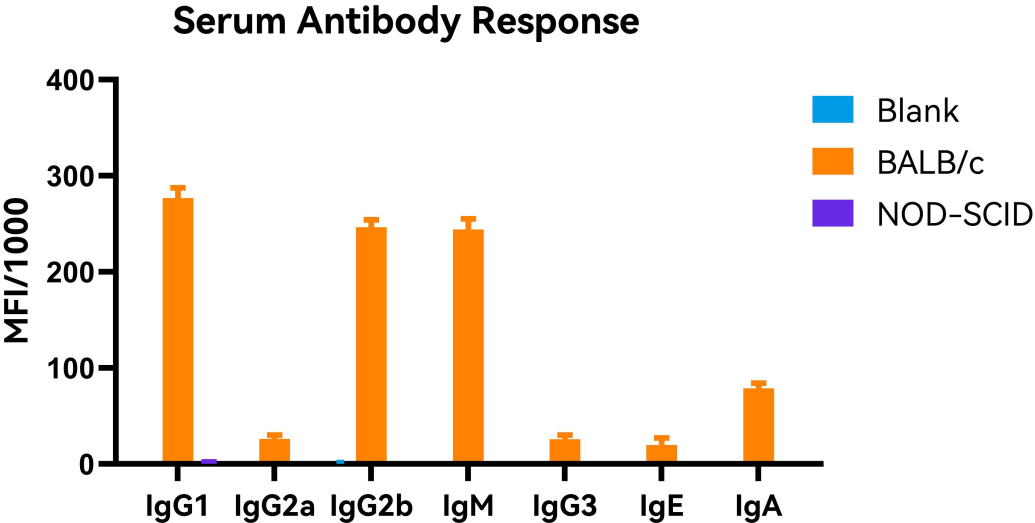


NOD SCID body Weight Growth Curve



	3w	4w	5w	6w	7w	8w	9w	10w
Male(g)	13.9±2.3	22.7±2.6	24.7±2.1	25.5±2.0	26.6±1.8	27.7±2.2	28.8±2.3	30.2±2.2
Female(g)	13.2±2.6	18.5±1.4	19.3±1.5	20.3±1.5	21.3±1.4	22.2±1.5	22.9±1.7	23.7±1.5

图1. NOD SCID小鼠生长曲线。



Serum Antibody Response(MFI/1000)			
Parameter	Blank	BALB/c	NOD SCID
IgG1	1.28 ± 0.03	276.83 ± 10.64	1.69 ± 0.41
IgG2a	0.55 ± 0.05	26.12 ± 3.88	0.44 ± 0.01
IgG2b	1.28 ± 0.29	246.64 ± 7.36	0.78 ± 0.04
IgM	0.27 ± 0.04	244.19 ± 11.02	0.47 ± 0.09
IgG3	0.22 ± 0.01	25.72 ± 4.61	0.19 ± 0.00
IgE	0.15 ± 0.02	19.68 ± 7.59	0.16 ± 0.02
IgA	0.18 ± 0.02	78.96 ± 5.19	0.17 ± 0.01

图2. NOD SCID小鼠血清抗体亚类检测（雄性，8周龄）。

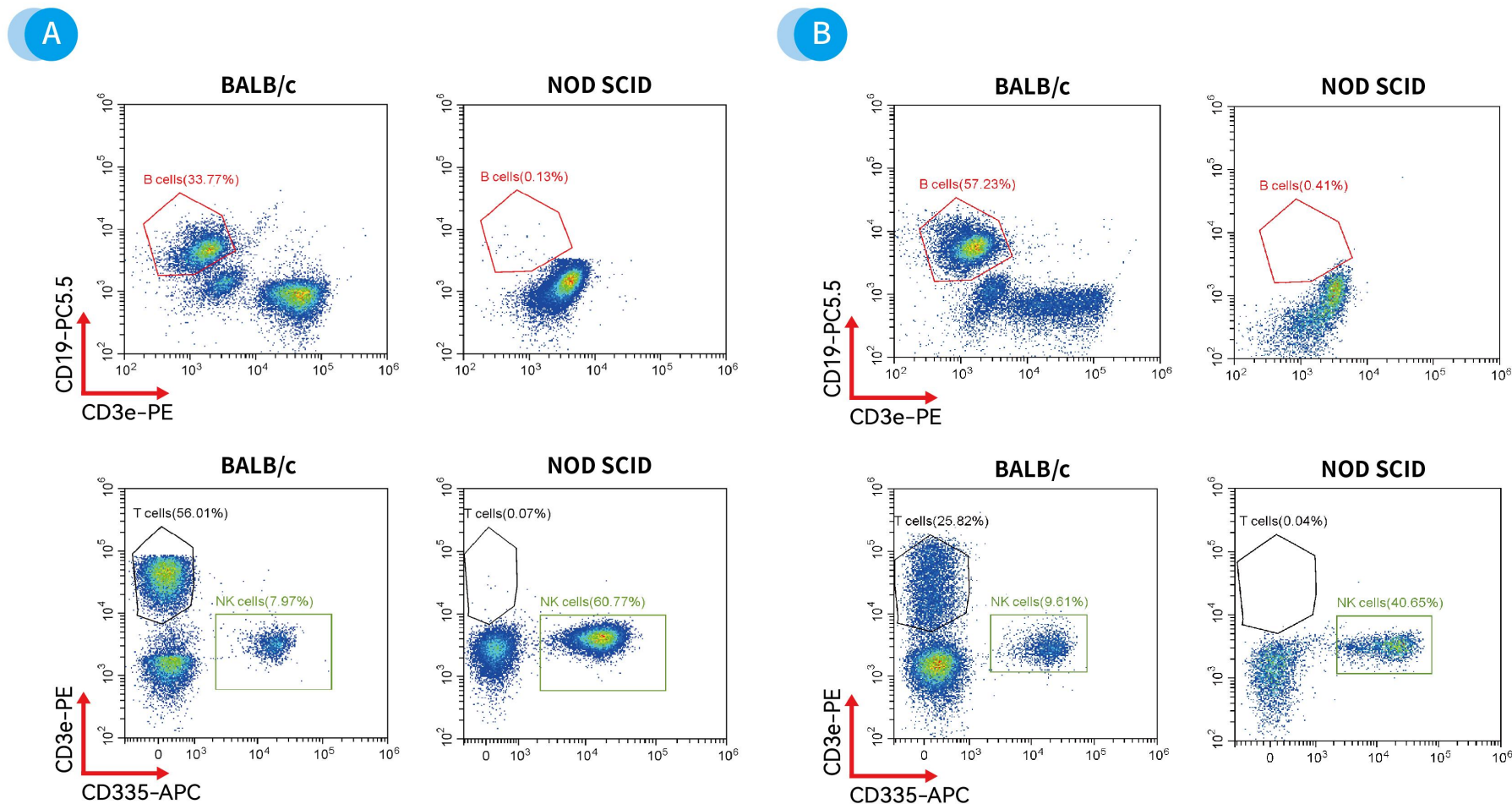


图3.NOD SCID小鼠脾脏(A)和血液(B)中T、B细胞缺失，NK细胞代偿性增加。取BALB/c和NOD SCID（雌性，6周龄）的脾脏细胞及外周血，通过FACS对其中T、B和NK细胞的组成进行分析。

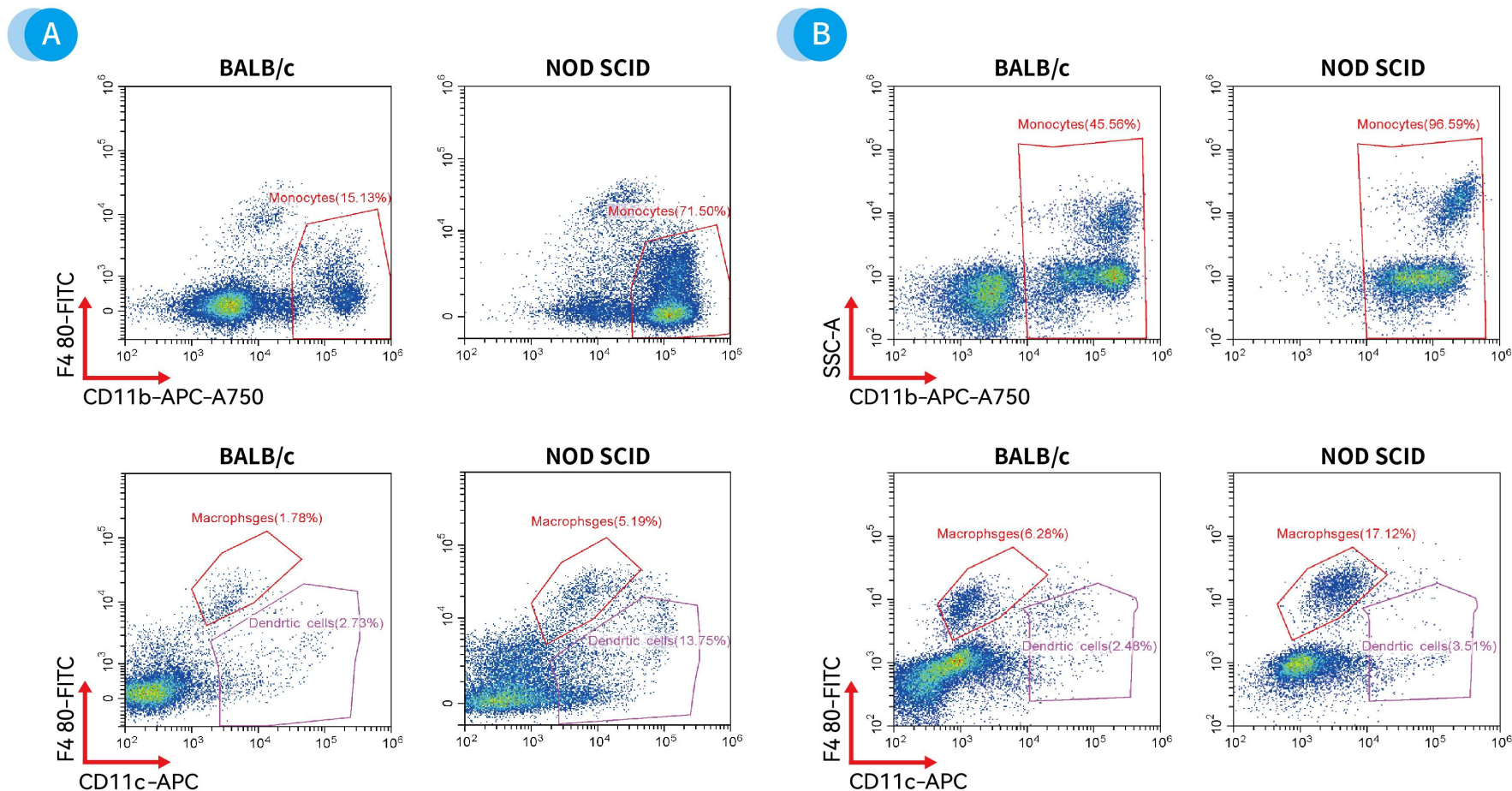


图4. NOD SCID小鼠脾脏(A)和血液(B)中单核细胞、巨噬细胞和DC细胞比例。取 BALB/c及NOD SCID小鼠（雌性，6周龄）的脾脏细胞及外周血，通过 FACS 对其中单核细胞、巨噬细胞和 DC 细胞的组成进行分析。

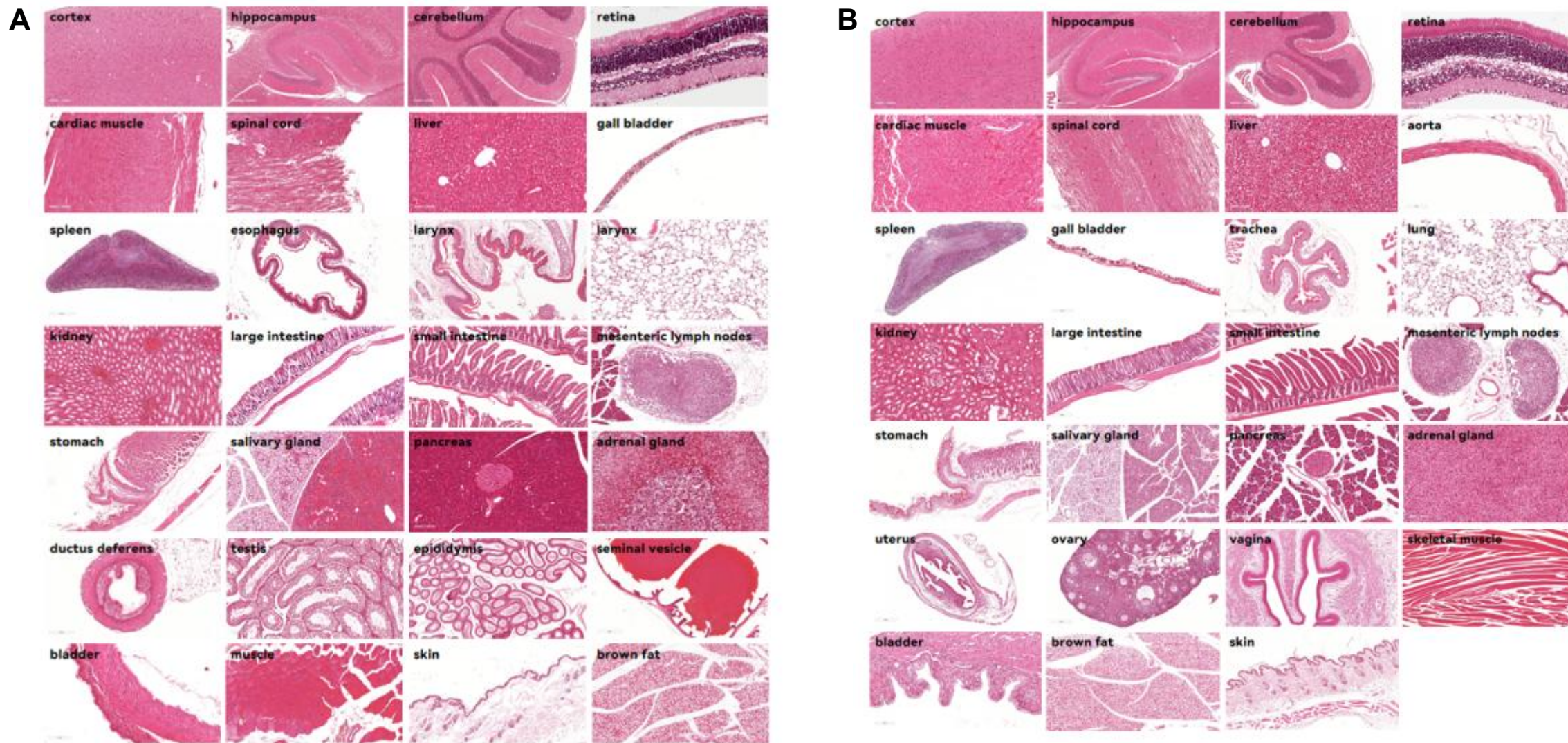


图5. NOD SCID小鼠各组织病理学检测。NOD SCID小鼠胸腺缺失，其他检测组织未发现有明显病理性异常（8周龄，A雄性，B雌性）。

表1. NOD SCID小鼠血常规检测

Parameter	Full Name	Units	Male 8 weeks; n=20	Female 8 weeks; n=20	Male 12 weeks; n=20	Female 12 weeks; n=20
WBC	White blood cell count	10 ³ cells/uL	2.48 ± 0.24	1.85 ± 0.11	3.24 ± 0.27	3.16 ± 0.39
RBC	Red blood cell count	10 ⁶ cells/uL	9.62 ± 0.08	9.77 ± 0.04	9.59 ± 0.18	9.71 ± 0.10
HGB	Hemoglobin	g/dL	14.73 ± 0.30	15.39 ± 0.08	14.77 ± 0.22	15.10 ± 0.19
HCT	Hematocrit	%	49.66 ± 0.40	50.10 ± 0.30	49.24 ± 0.78	49.29 ± 0.56
MCV	Mean corpuscular volume	fL	51.65 ± 0.22	51.28 ± 0.26	51.47 ± 0.30	50.77 ± 0.25
MCH	Mean corpuscular hemoglobin	pg	15.28 ± 0.23	15.74 ± 0.06	15.44 ± 0.10	15.55 ± 0.07
MCHC	Mean corpuscular hemoglobin concentration	g/dL	29.60 ± 0.46	30.72 ± 0.08	30.01 ± 0.08	30.62 ± 0.12
PLT	Platelet count	10 ⁶ cells/uL	1.84 ± 0.05	1.65 ± 0.03	1.84 ± 0.05	1.70 ± 0.04
NEUT	Neutrophil ratio	%	16.19 ± 4.44	37.24 ± 4.64	7.65 ± 2.87	14.85 ± 4.44
LYMPH	Lymphocyte ratio	%	60.97 ± 4.68	38.52 ± 4.68	72.90 ± 3.25	66.80 ± 4.08
MONO	Monocyte ratio	%	19.57 ± 1.31	20.76 ± 1.58	16.25 ± 0.88	15.90 ± 0.87
EO	Eosinophil ratio	%	3.25 ± 0.62	3.49 ± 0.31	3.14 ± 0.92	2.43 ± 0.23
BASO	Basophil ratio	%	0.03 ± 0.02	0.00 ± 0.00	0.07 ± 0.04	0.03 ± 0.02
NEUT	Neutrophil ratio	10 ³ cells/uL	0.51 ± 0.18	0.67 ± 0.09	0.24 ± 0.08	0.50 ± 0.22
LYMPH	Lymphocyte count	10 ³ cells/uL	1.40 ± 0.11	0.70 ± 0.09	2.40 ± 0.25	2.09 ± 0.32
MONO	Monocyte count	10 ³ cells/uL	0.49 ± 0.05	0.38 ± 0.04	0.51 ± 0.04	0.50 ± 0.08
EO	Eosinophil count	10 ³ cells/uL	0.08 ± 0.01	0.06 ± 0.01	0.10 ± 0.03	0.07 ± 0.005
BASO	Basophil count	10 ³ cells/uL	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.002 ± 0.00
RDW-SD	Red blood cell distribution width-standard deviation	fL	30.52 ± 0.59	29.46 ± 0.61	32.58 ± 0.29	31.26 ± 0.46
RDW-CV	Red blood cell distribution width-coefficient of variation	%	19.15 ± 0.60	18.77 ± 0.65	20.59 ± 0.38	20.11 ± 0.47
PDW	Platelet volume distribution width	fL	7.02 ± 0.14	7.21 ± 0.10	7.26 ± 0.07	7.41 ± 0.14
MPV	Mean platelets volume	fL	6.57 ± 0.04	6.85 ± 0.04	6.61 ± 0.06	6.78 ± 0.07
P-LCR	Platelet-larger cell ratio	%	4.59 ± 0.15	5.49 ± 0.17	4.95 ± 0.31	5.47 ± 0.38
PCT	Platelet hematocrit	%	1.21 ± 0.04	1.13 ± 0.02	1.21 ± 0.03	1.15 ± 0.02
RET	Reticulocyte ratio	%	5.80 ± 0.15	5.78 ± 0.19	5.43 ± 0.14	5.86 ± 0.19
RET	Reticulocyte count	10 ³ cells/uL	557.13 ± 14.46	563.29 ± 17.51	0.52 ± 0.02	0.57 ± 0.02
IRF	Immature reticulocyte fraction	%	51.42 ± 0.45	50.67 ± 0.77	51.07 ± 0.52	48.67 ± 0.74
LFR	Low fluorescent reticulocyte ratio	%	48.58 ± 0.45	49.34 ± 0.77	48.94 ± 0.52	51.34 ± 0.74
MFR	Medium fluorescent reticulocyte ratio	%	16.44 ± 0.23	17.99 ± 0.28	16.33 ± 0.34	16.71 ± 0.26
HFR	High fluorescent reticulocyte ratio	%	34.99 ± 0.38	32.68 ± 0.65	34.74 ± 0.44	31.96 ± 0.76

表2. NOD SCID小鼠血生化检测

Parameter	Full Name	Units	Male 8 weeks; n=14	Female 8 weeks; n=14	Male 12 weeks; n=14	Female 12 weeks; n=14
TP	Total Protein	g/dL	4.82 ± 0.04	4.79 ± 0.04	4.96 ± 0.07	5.03 ± 0.05
ALB	Albumin	g/dL	2.30 ± 0.02	2.31 ± 0.01	2.24 ± 0.03	2.27 ± 0.03
T-BIL	Total Bilirubin	mg/dL	0.03 ± 0.00	0.05 ± 0.00	0.11 ± 0.01	0.05 ± 0.00
ALT	Alanine Aminotransferase	U/L	42.36 ± 5.46	43.29 ± 3.62	34.29 ± 1.97	43.21 ± 4.78
AST	Aspartate Aminotransferase	U/L	163.57 ± 5.68	206.50 ± 9.34	203.29 ± 6.03	207.79 ± 6.92
ALP	Alkaline Phosphatase	U/L	200.71 ± 2.84	301.21 ± 5.23	168.00 ± 3.94	257.71 ± 9.48
GGT	γ-Glutamyl Transpeptidase	U/L	0.74 ± 0.11	0.61 ± 0.07	0.39 ± 0.20	0.31 ± 0.08
CRE	Creatinine	mg/dL	0.14 ± 0.00	0.16 ± 0.00	0.11 ± 0.01	0.15 ± 0.00
BUN	Urea nitrogen	mg/dL	164.44 ± 2.22	162.00 ± 3.79	157.63 ± 3.05	157.11 ± 1.65
TCHO	Total Cholesterol	mg/dL	85.76 ± 0.91	57.81 ± 0.96	85.21 ± 1.82	68.31 ± 0.95
TG	Triglyceride	mg/dL	107.01 ± 8.50	57.55 ± 3.84	68.88 ± 3.39	60.59 ± 2.58
HDL-C	High Density Lipoprotein Cholesterol	mg/dL	74.55 ± 1.43	51.68 ± 1.15	73.00 ± 1.13	54.61 ± 0.94
LDL-C	Low Density Lipoprotein Cholesterol	mg/dL	2.82 ± 0.13	5.66 ± 0.41	5.77 ± 0.17	9.25 ± 0.34
NEFA	Nonesterified Fatty Acid	meq/L (mmol/L)	1.35 ± 0.01	1.33 ± 0.004	1.6 ± 0.01	1.56 ± 0.01
Ca	mg/dL	Calcium	9.01 ± 0.04	8.81 ± 0.05	10.44 ± 0.11	10.62 ± 0.18
IP	mg/dL	Phosphorus	0.72 ± 0.01	0.73 ± 0.01	0.91 ± 0.02	0.84 ± 0.02
K	meq/L (mmol/L)	Kalium	9.55 ± 0.08	8.45 ± 0.08	9.65 ± 0.15	9.36 ± 0.12
Na	meq/L (mmol/L)	Natrium	190.76 ± 1.08	167.37 ± 12.49	174.72 ± 1.23	174.13 ± 0.60
CL	meq/L (mmol/L)	Chlorine	103.20 ± 0.32	103.91 ± 0.31	103.44 ± 0.35	107.31 ± 0.88
CK	U/L	Creatine Kinase	580.36 ± 35.60	896.86 ± 42.95	1199.86 ± 87.38	1027.21 ± 71.34
GLU	mg/dL	Blood Glucose	133.23 ± 3.67	121.65 ± 5.32	137.84 ± 7.12	123.99 ± 3.80

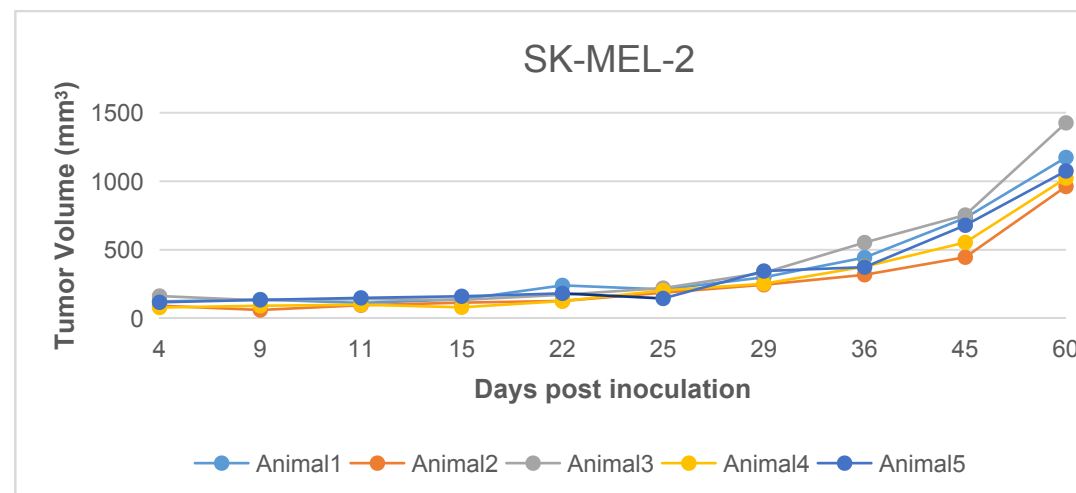
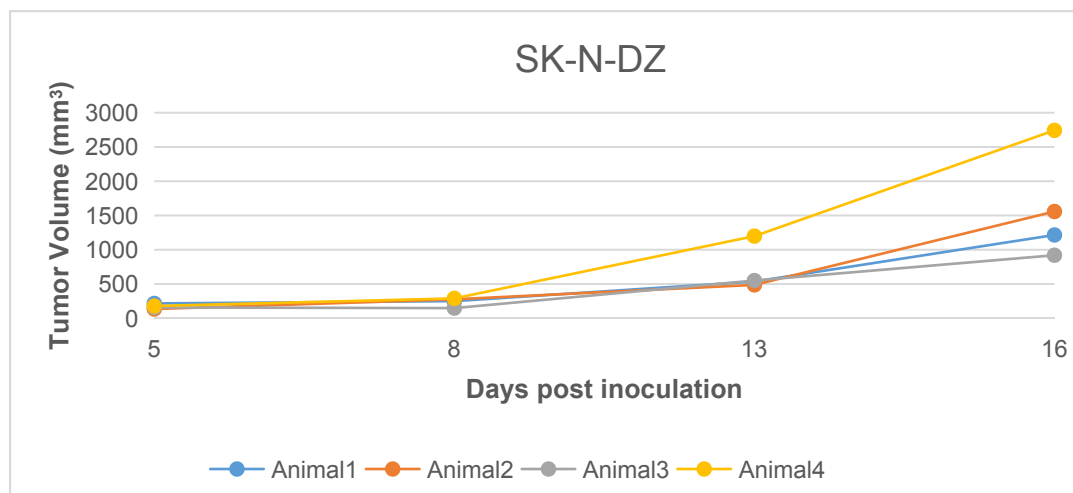
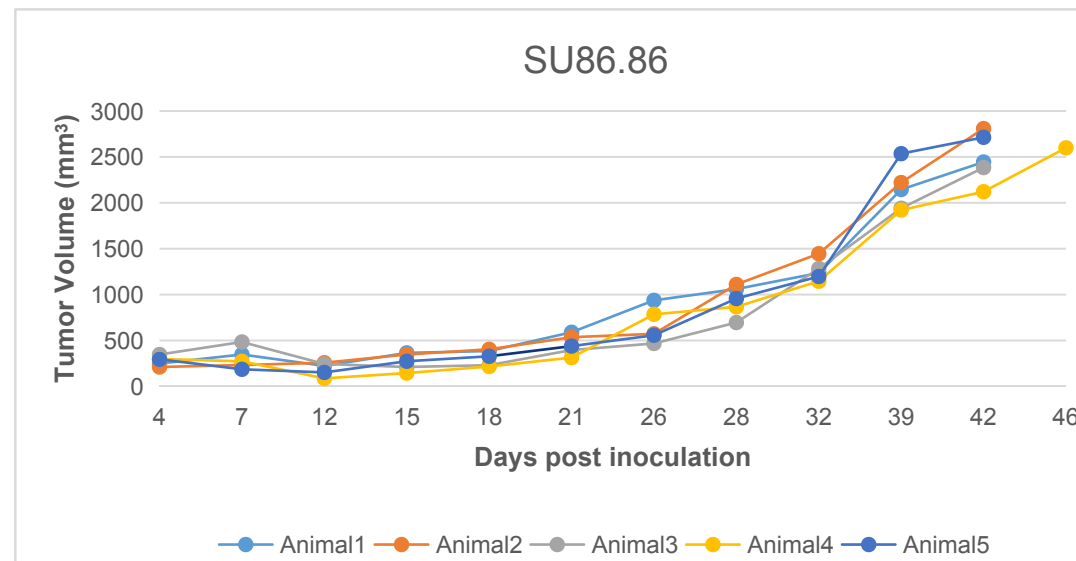
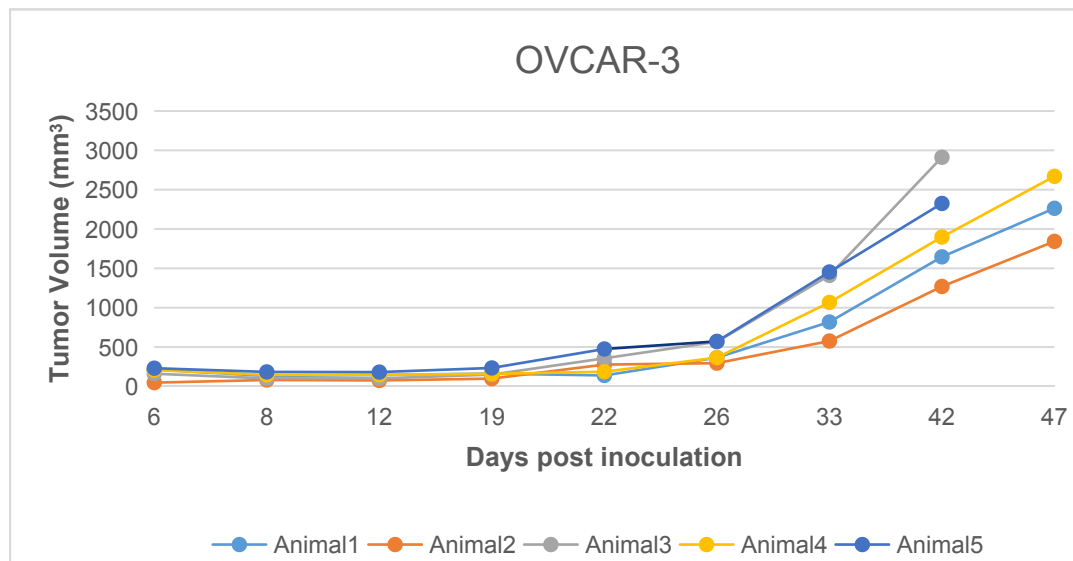


图6.NOD SCID小鼠上的成瘤验证示例。

表3. NOD SCID异种移植细胞系参考

Cancer Type	Cell Lines (200+)
Breast	MCF-7/5C,MCF-7/TAM2,MCF-7/RAL2,MCF-7/RAL1,MCF-7/E2,MCF-7,MDA-MB-231,T47D,BT-20,MDA-MB-435,MCF10A,MDA-MB-435/LCC6,MCF-7LU,M4A4-LM,SUM149PT...
Lung	HCC827,NCI-H358,A549,NCI-H1299,LT391-06,SK-MES-1,Calu-3,NCI-H460,NCI-H2126,NCI-H1975,NYH,NCI-H727,GLC19...
Liver	Hep3B2.1-7,HepG2...
Prostate	LNCaP,VCaP,PC-3,LNCaPC4-2B,LAPC-4,DU145,PC-82,PC-310,PC-295,PC346-DCC-K,PC3-MM2,PC-346C...
Gallbladder	Mz-ChA-1,CC-SW-1,Sk-ChA-1,TFK-1,Mz-ChA-2...
Glioblastoma	LN229,U251HF,U87vIII,T98G,U87MG,U373MG,LN-827...
Melanoma	SK-MEL-31,SK-MEL-28,SK-MEL-5,A-375,WM1617,WM9,G-361...
Colon	T84,HT-29,HCT116,LS174T,SW620...
Bladder	KU-19-19,URO-MS24,URO-ASC,UROtsa,URO-MS25,RT4...
Leukemia	HL-60,Nalm-6-UM1,Jurkat,ML-2,NB4...
Ovarian	TOV-21G,TOV-112D,A2780,OVCA3,A2780/CP70,A2780cis...
Pancreatic	BxPC-3,Capan-1,MIAPaCa-2,PANC-1,L3.6pl,HPAF-II...
Glioma	BT-40,A-172...
Lymphoma	BC-3,Namalwa,WSU-FSCCL,Daudi...
Head and neck	FaDu...
Kidney	786-O...
Carcinoma	A-498...
Cervical	HeLa...
Myeloma	INA-6...
Neuroblastoma	SK-N-AS,NGP,SY5Y,NB-1691,CHLA-20,SK-N-FI...
Osteosarcoma	SaOS-LM7,LM7...
Stomach	MKN28,NCI-N87,MKN45...
Adenocarcinoma	KB-C2,KB-3-1...
Others	U-251MG,Caki-1,AN3CA,HT-1080...

感谢阅读



南模生物
SHANGHAI
MODEL ORGANISMS

科创板代码
688265

编辑基因 解码生命

上海总部地址：上海市浦东新区半夏路178号2号楼

广东南模地址：广东省中山市火炬开发区神农路6号健康基地智汇园A8栋8层

砥石生物地址：上海市金山区金流路1438号2幢

Phone: 400-728-0660

Web: www.modelorg.com

Email: info@modelorg.com