



NOD SCID

Nomenclature	NOD.Cg- <i>Prkdc</i> ^{scid} /NifdcSmoc
Cat. NO.	SM-019
Strain State	Repository Live

Gene Summary

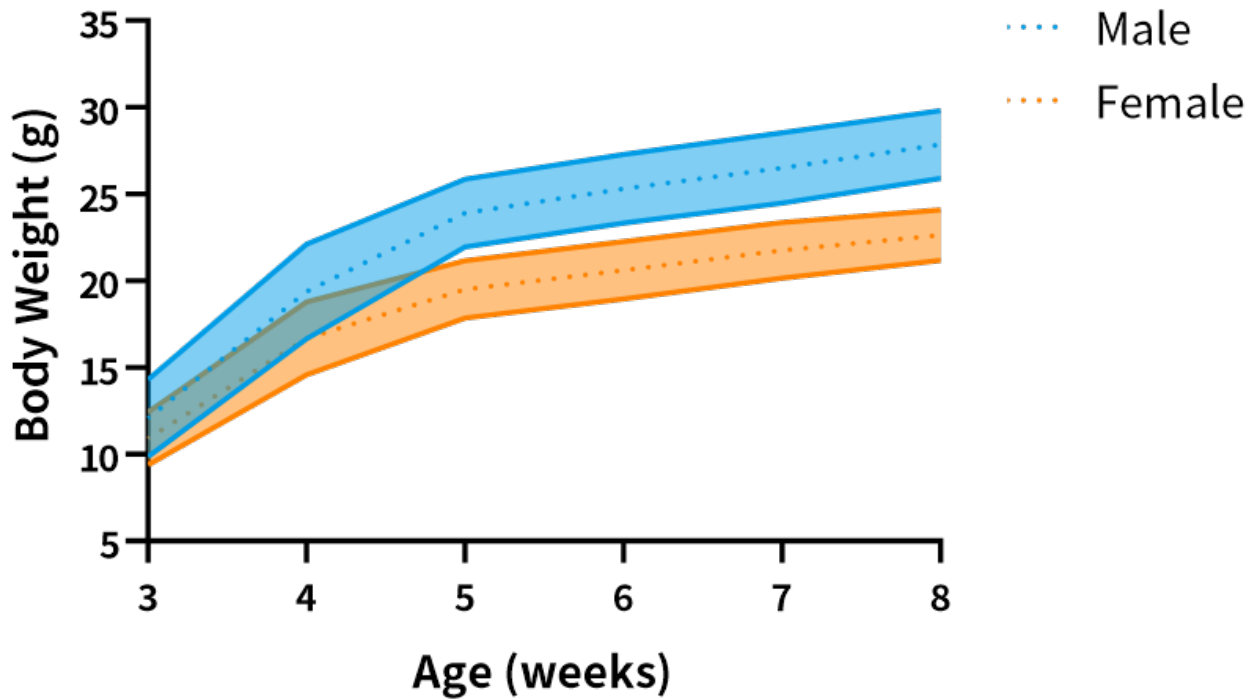
Model Description

The strain was developed on background of non-obese diabetic (NOD) mouse with spontaneous scid mutation. NOD SCID mouse, insusceptible to diabetes, possesses reduced activity of T cells and B cells, and defect in innate immunity. NOD SCID mouse is compatible with a wider range of engraftment of cell lines in comparison with nude mouse; And it is broadly applied to construction of PDX models. However, due to a short life span(8-9 months) caused by lethal thymic lymphomas, it is unsuitable for long-term in vivo assays.

*Literature published using this strain should indicate: NOD SCID mice (Cat. NO. SM-019) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

Body Weight of NOD SCID



	3W	4W	5W	6W	7W	8W
Male	12.08±2.24	19.39±2.73	23.91±1.95	25.31±1.97	26.52±2.03	27.87±1.96
Female	10.91±1.52	16.68±2.11	19.5±1.67	20.62±1.66	21.75±1.6	22.63±1.46

Fig1. Body weight growth curve of NOD SCID (n=1046)

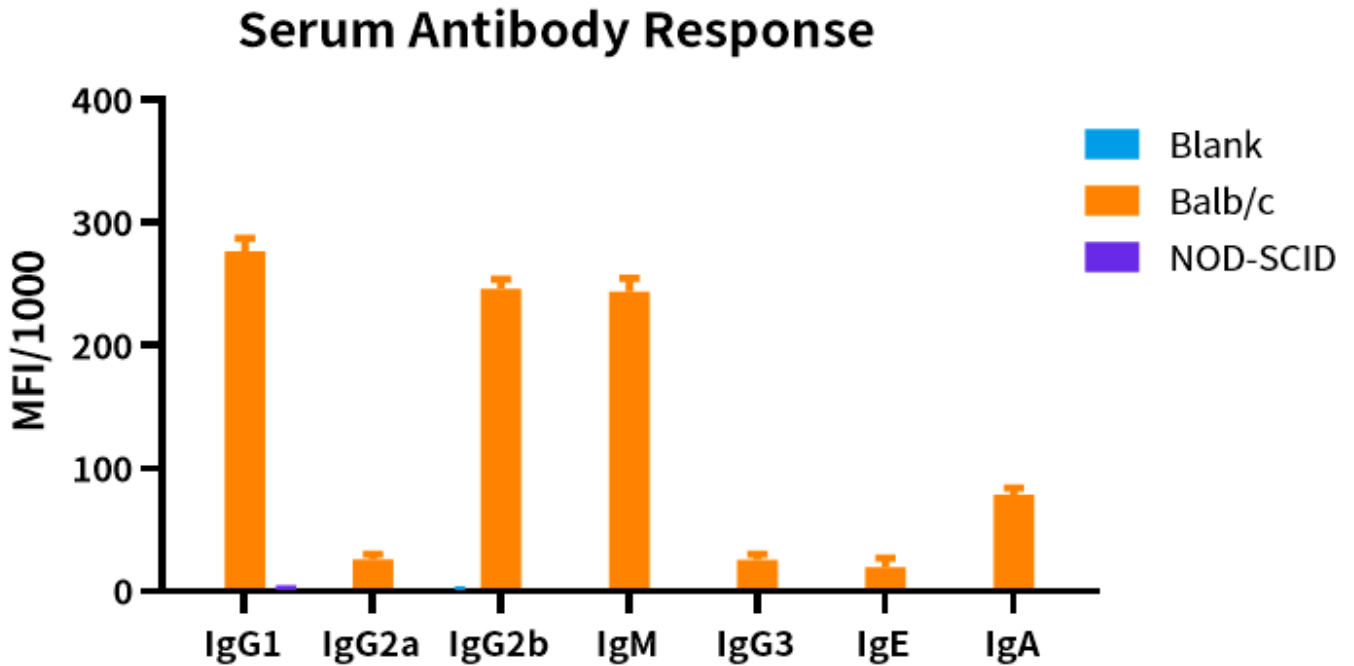


Fig 2. Detection of serum antibody subclasses in NOD SCID mice (8-week old, male).

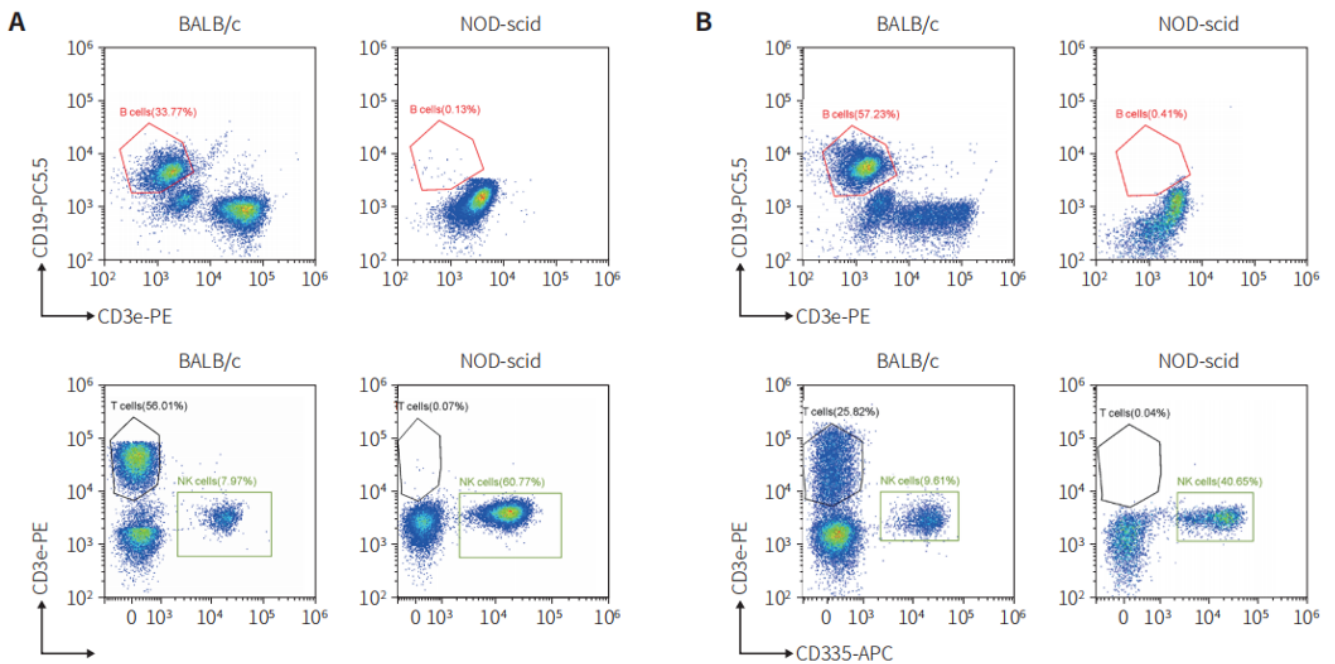


Fig3. Complete deletion of T, B and NK cells of NOD SCID mice. Spleen and peripheral blood cells NOD SCID mice were collected to analyze their compositions of T, B and NK cells by FACS.

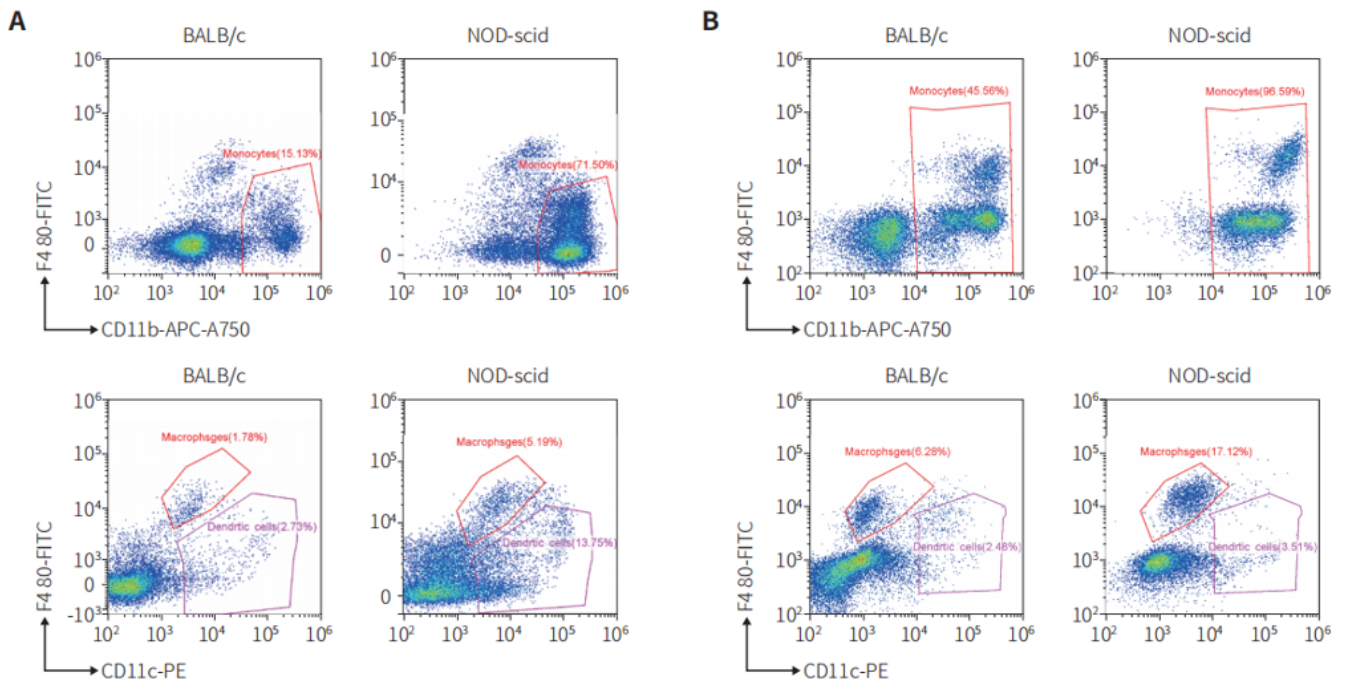


Fig4. Complete deletion of Monocytes, macrophages and DC cells of NOD SCID mice. Spleen and peripheral blood cells NOD SCID mice were collected to analyze their compositions of Monocytes, macrophages and DC cells by FACS.

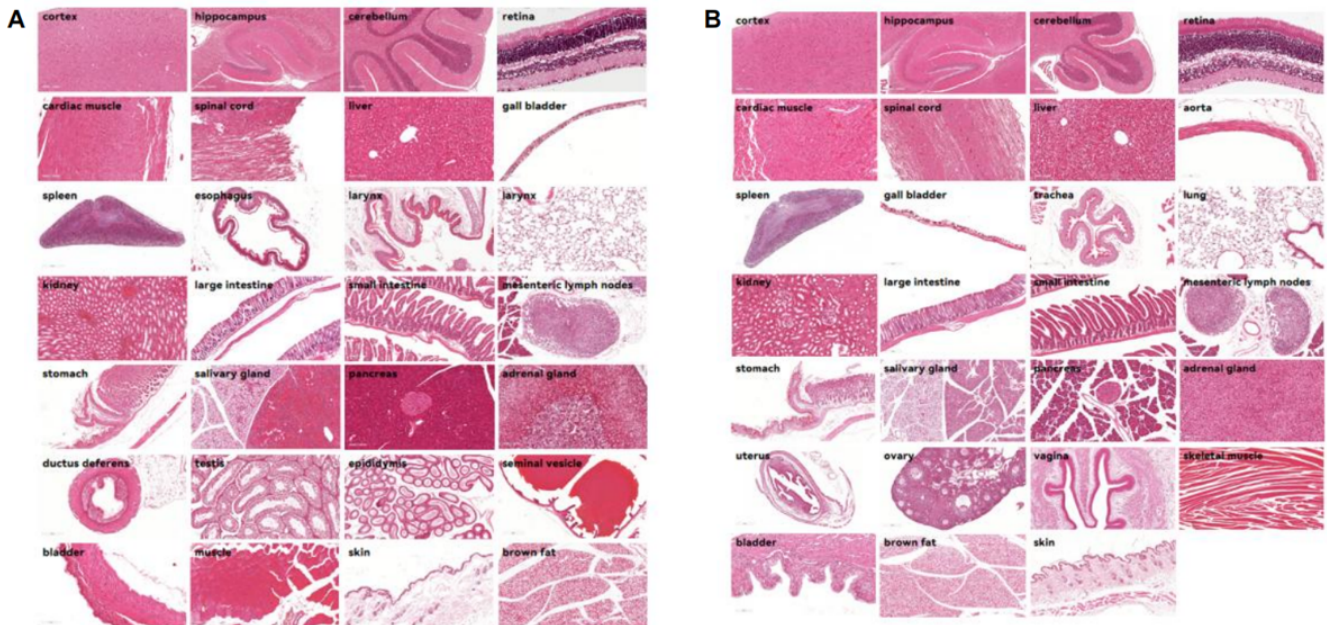


Fig5. Pathological examination of various tissues in NOD SCID mice. Thymus was absent in NOD SCID mice, and no significant pathologic abnormalities were found in the other tissues examined (8-week old, A males, B females).

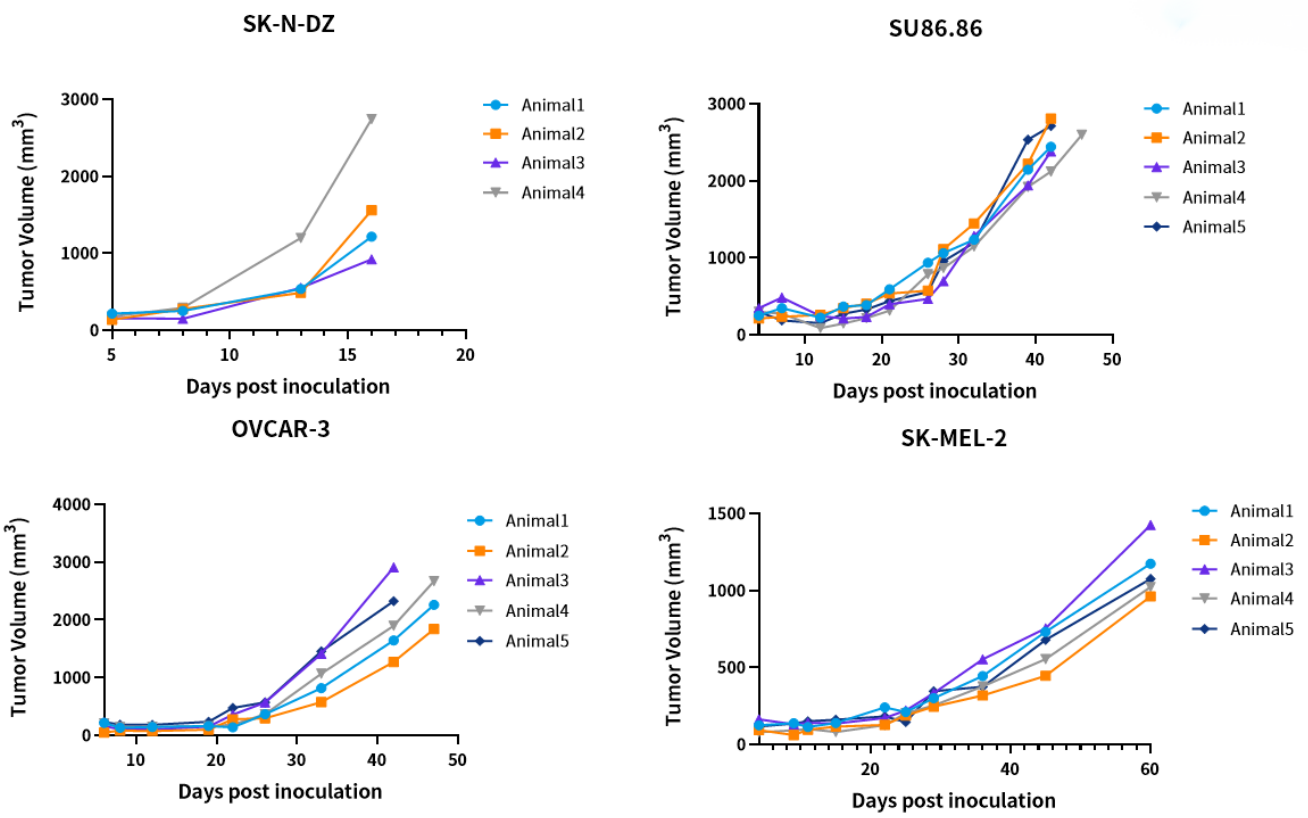


Fig6. Subcutaneous xenograft tumor growth in NOD SCID.

Parameter	Units	NOD SCID; Male	NOD SCID; Female
		8-10 weeks; n=10	8-10 weeks; n=10
WBC	10 ³ cells/ μ L	2.21 \pm 0.22	1.86 \pm 0.25
RBC	10 ⁶ cells/ μ L	9.14 \pm 0.10	9.40 \pm 0.13
HGB	g/dL	14.33 \pm 0.19	15.13 \pm 0.18
HCT	%	48.85 \pm 0.61	50.19 \pm 0.52
MCV	fL	53.45 \pm 0.15	53.42 \pm 0.35
MCH	pg	15.67 \pm 0.09	16.10 \pm 0.06
MCHC	g/dL	29.34 \pm 0.14	30.15 \pm 0.19
PLT	10 ⁶ cells/ μ L	2330.70 \pm 75.89	1788.10 \pm 58.85
RDW-SD	fL	33.90 \pm 0.28	34.39 \pm 0.16
RDW-CV	%	20.29 \pm 0.16	20.77 \pm 0.20
PDW	fL	8.03 \pm 0.13	8.36 \pm 0.26
MPV	fL	7.17 \pm 0.09	7.36 \pm 0.14
P-LCR	%	7.54 \pm 0.43	8.63 \pm 0.89
PCT	%	1.67 \pm 0.05	1.31 \pm 0.03
NEUT#	10 ³ cells/ μ L	0.14 \pm 0.05	0.26 \pm 0.10
LYMPH#	10 ³ cells/ μ L	1.65 \pm 0.17	1.27 \pm 0.22
MONO#	10 ³ cells/ μ L	0.42 \pm 0.07	0.24 \pm 0.04
EO#	10 ³ cells/ μ L	0.05 \pm 0.01	0.06 \pm 0.02
BASO#	10 ³ cells/ μ L	0.01 \pm 0.00	0.02 \pm 0.01
NEUT%	%	5.64 \pm 1.86	14.19 \pm 5.07
LYMPH%	%	73.58 \pm 1.65	67.65 \pm 5.96
MONO%	%	18.03 \pm 1.72	13.04 \pm 1.25
EO%(%)	%	2.13 \pm 0.34	3.85 \pm 1.58
BASO%	%	0.57 \pm 0.16	1.27 \pm 0.51
RET#	10 ⁶ cells/ μ L	0.51 \pm 0.01	0.62 \pm 0.02
RET%	%	5.53 \pm 0.12	6.59 \pm 0.22
LFR(%)	%	44.74 \pm 0.71	45.77 \pm 0.63
MFR(%)	%	19.11 \pm 0.54	18.81 \pm 0.39
HFR(%)	%	36.15 \pm 0.50	35.42 \pm 0.44
IRF(%)	%	55.26 \pm 0.71	54.23 \pm 0.63

Fig7. Blood routine tests in NOD SCID.

Parameter	Units	NOD SCID; Male	NOD SCID; Female
		8-10 weeks; n=10	8-10 weeks; n=10
TP	g/L	57.50±0.83	56.50±0.76
ALB	g/L	26.00±0.67	26.00±0.67
ALP	U/L	255.00±14.62	458.00±11.65
ALT	U/L	155.00±55.99	131.50±79.08
AST	U/L	258.00±49.65	310.00±122.93
T-BIL	µmol/L	2.81±0.17	1.68±0.20
D-BIL	µmol/L	2.58±0.12	2.43±0.39
CHE	U/L	4459.00±121.79	8907.00±233.85
CRE	µmol/L	18.60±0.32	19.67±0.72
BUN	mmol/L	11.00±0.21	10.25±0.35
UA	µmol/L	210.35±20.89	229.00±20.54
TCHO	mmol/L	2.97±0.08	2.19±0.07
TG	mmol/L	1.07±0.09	0.73±0.09
HDL	mmol/L	2.98±0.09	2.19±0.07
LDL	mmol/L	1.92±0.03	2.00±0.02
NEFA	mmol/L	1.11±0.04	0.87±0.05
LDH	U/L	976.00±126.31	1021.00±201.50
CK	U/L	638.50±137.07	843.50±202.90
Hcy	µmol/L	5.05±0.05	6.69±0.68
GLU	mmol/L	12.12±0.97	11.58±0.68
Ca	mmol/L	3.25±0.07	3.33±0.07
IP	mmol/L	3.30±0.11	4.10±0.36
Fe	µmol/L	62.15±2.57	57.55±2.62
CRP	mg/L	0.00±0.00	0.00±0.00

Fig8. Blood biochemistry in NOD SCID.

Table 1. NOD SCID xenograft cell lines

Cancer Type	Cell Lines (100+)
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...
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-MSC24, URO-ASC, UROtsa, URO-MSC52, RT4...
Ovarian	TOV-21G, TOV-112D, A2780, OVCAR-3, A2780/CP70, A2780cis...
Pancreatic	BxPC-3, Capan-1, MIAPaCa-2, PANC-1, L3.6pl, HPAF-II...
Glioma	BT-40, A-172...
Kidney	786-O...
Carcinoma	A-498...
Cervical	HeLa...
Myeloma	INA-6...
Stomach	MKN28, NCI-N87, MKN45...
Adenocarcinoma	KB-C2, KB-3-1...
Others	U-251MG, Caki-1, AN3CA, HT-1080...

