

NOD SCID

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

Gene Summary

Gene Symbol <i>Prkdc</i>	Synonyms	p460, DNA-PKcs, scid, XRCC7, slp, DNAPK, DNPK1, HYRC1, dxnph, DOXNPH, DNAP Dcs, AU019811, AI326420
	NCBI ID	19090
	MGI ID	104779
	Ensembl ID	ENSMUSG00000022672

Model Description

The scid mutation has been transferred onto a diabetes-susceptible Non-Obese Diabetic (NOD) background. NOD-Scid mice do not develop diabetes, lack T and B cells, and are inherently immune deficient, making them good recipients for transplantation of human hematopoietic stem cells and human solid tumors.

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

Validation Data

NOD SCID body Weight Growth Curve

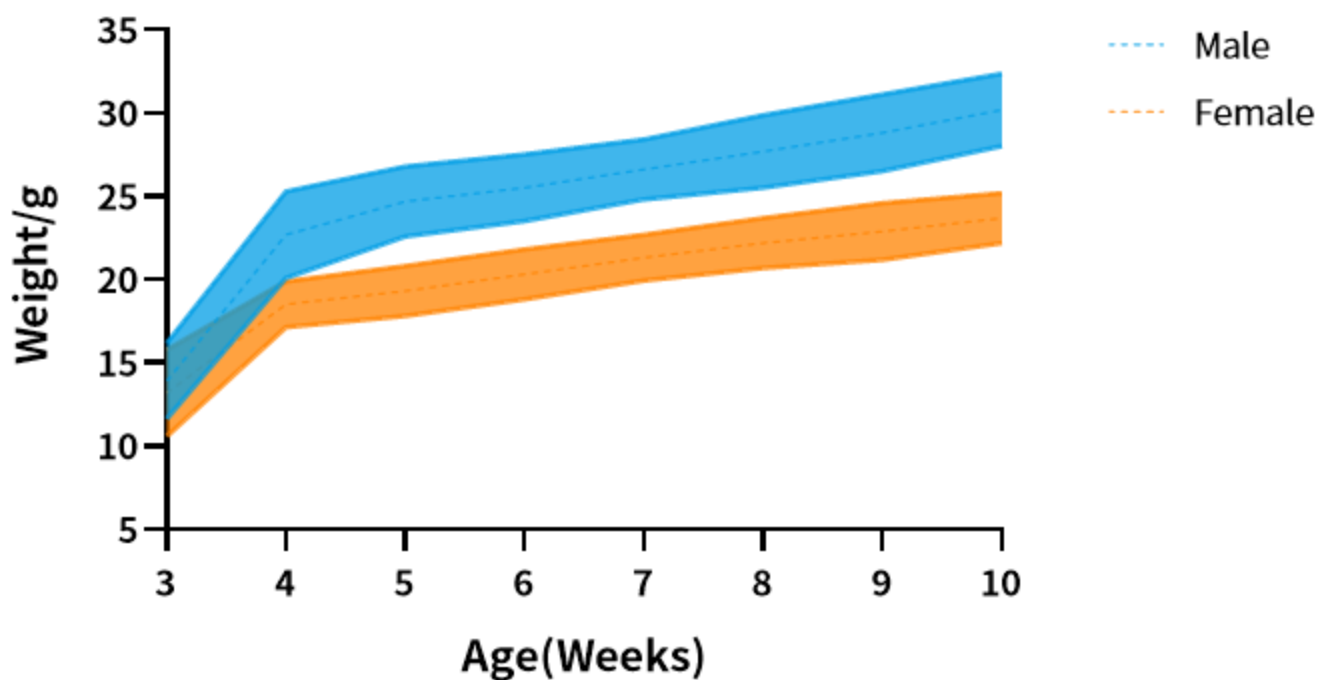


Fig1. Body weight growth curve of NOD SCID (n=168)

Serum Antibody Response

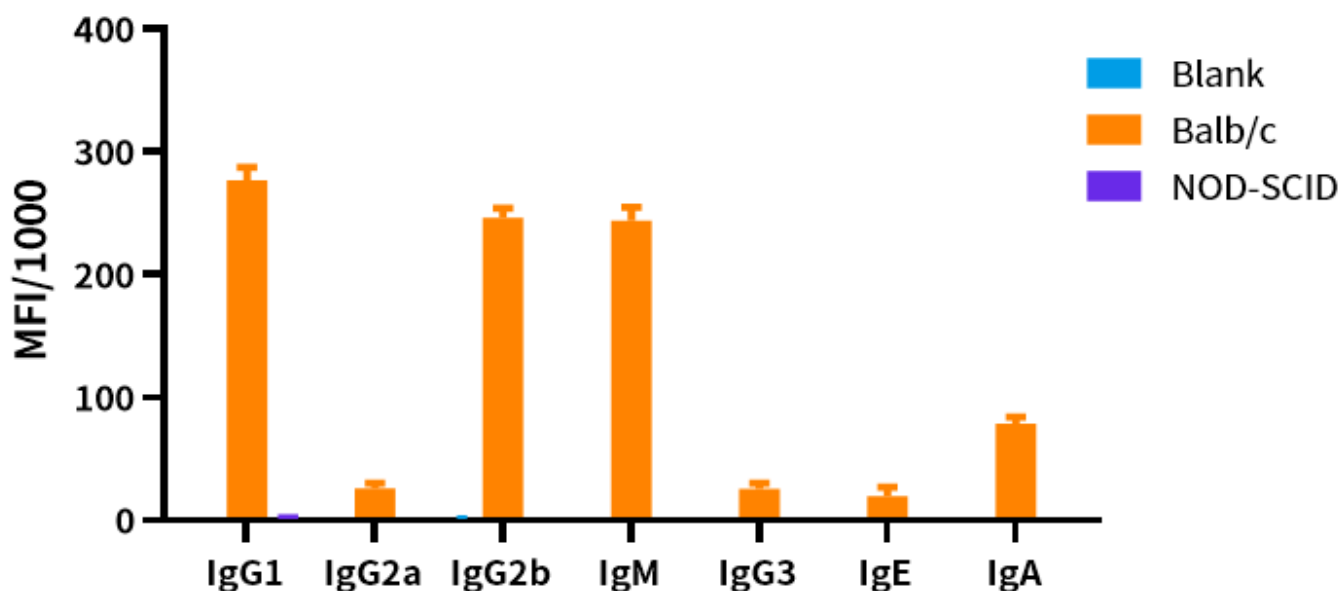


Fig 2. Detection of serum antibody subclasses in NOD SCID mice (8-week old, male).

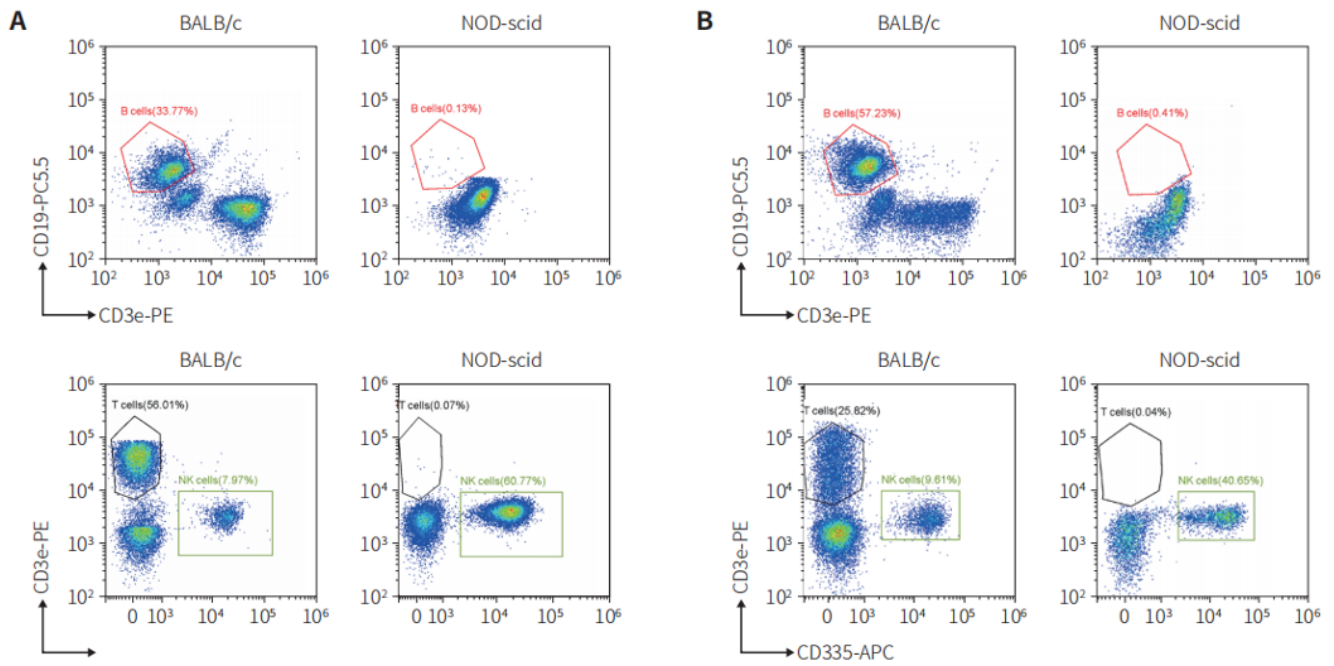


Fig3. Complete deletion of T, B and NK cells of NOD SCID mice. Spleen and peripheral blood cells NOD SCID mice were collected to analyze their compositions of T, B and NK cells by FACS.

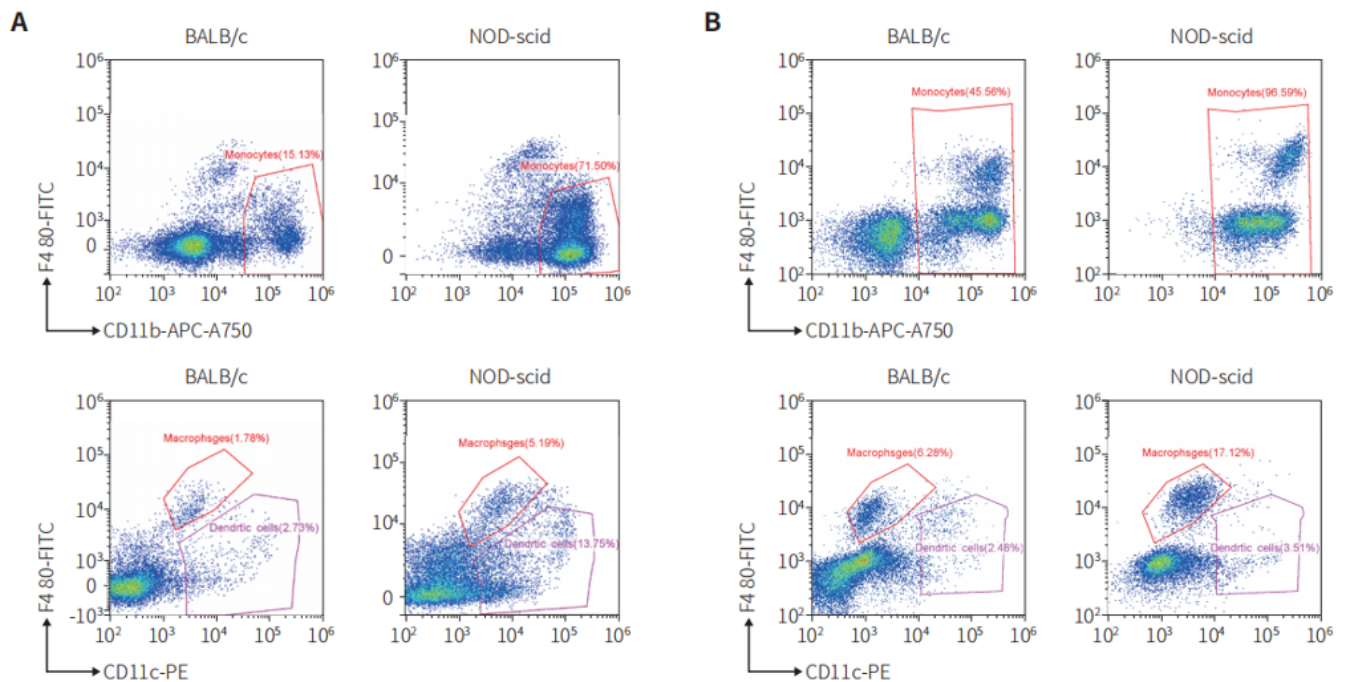


Fig4. Complete deletion of Monocytes, macrophages and DC cells of NOD SCID mice. Spleen and peripheral blood cells NOD SCID mice were collected to analyze their compositions of Monocytes, macrophages and DC cells by FACS.

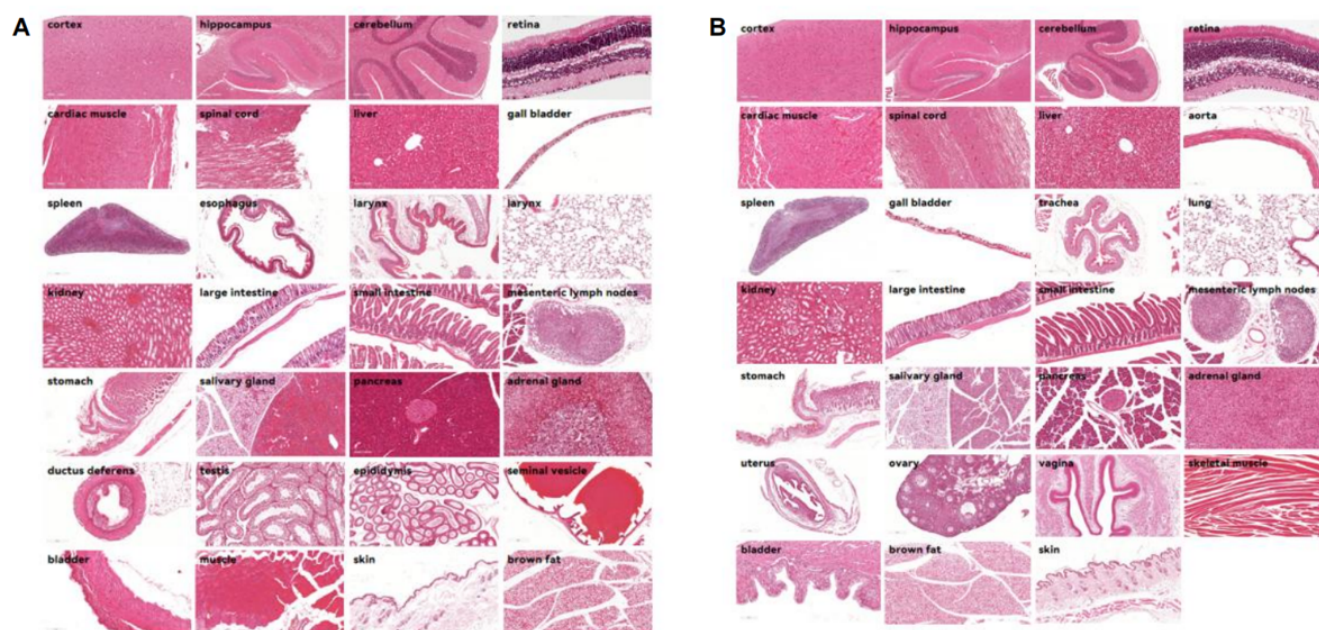


Fig5. Pathological examination of various tissues in NOD SCID mice. Thymus was absent in NOD SCID mice, and no significant pathologic abnormalities were found in the other tissues examined (8-week old, A males, B females).

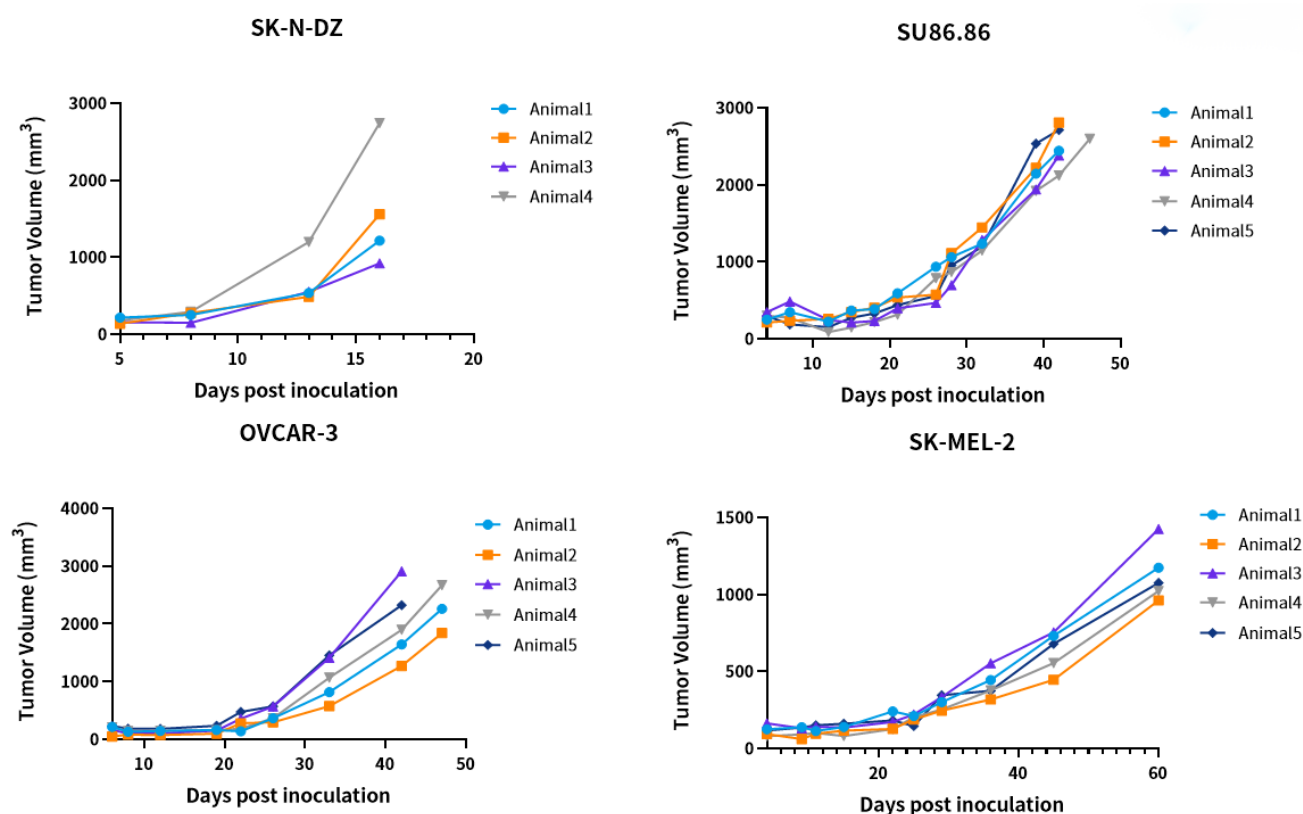


Fig6. Subcutaneous xenograft tumor growth in NOD SCID.

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...

