

ADC related platform for preclinical research



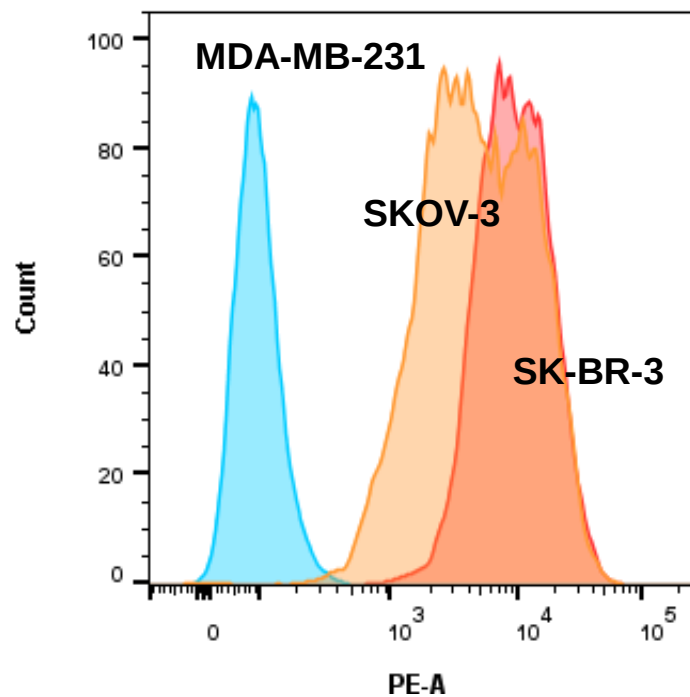
WuXi AppTec Research Service Division, Oncology & Immunology Unit



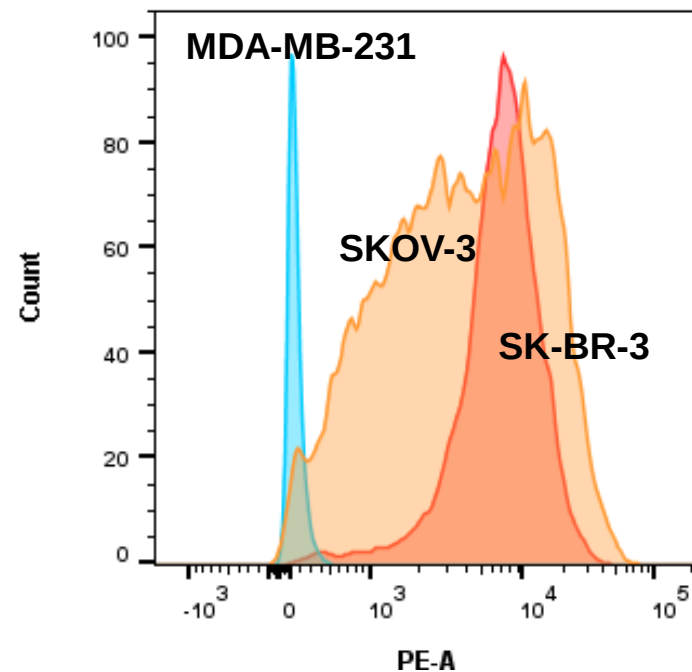
2021.07

ADC related *in vitro* assays

Target validation and antibody binding assay



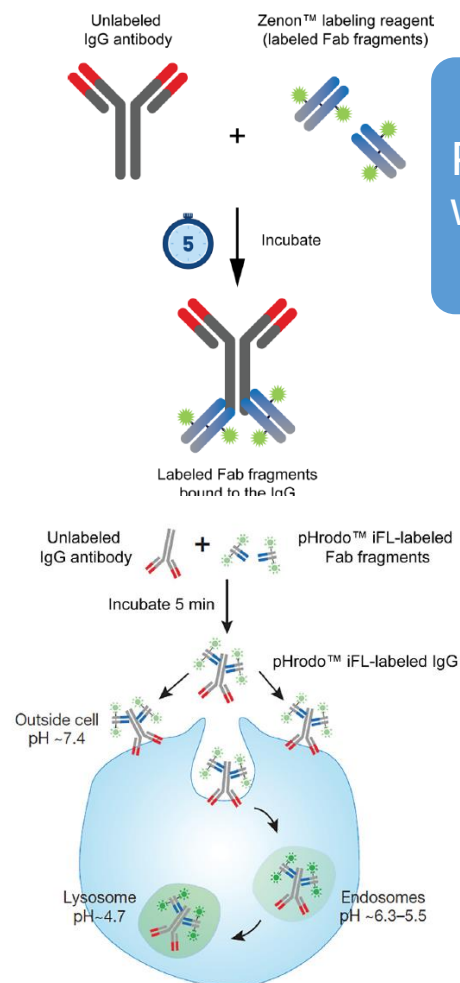
Herceptin



T-DM1

ADC related *in vitro* assays

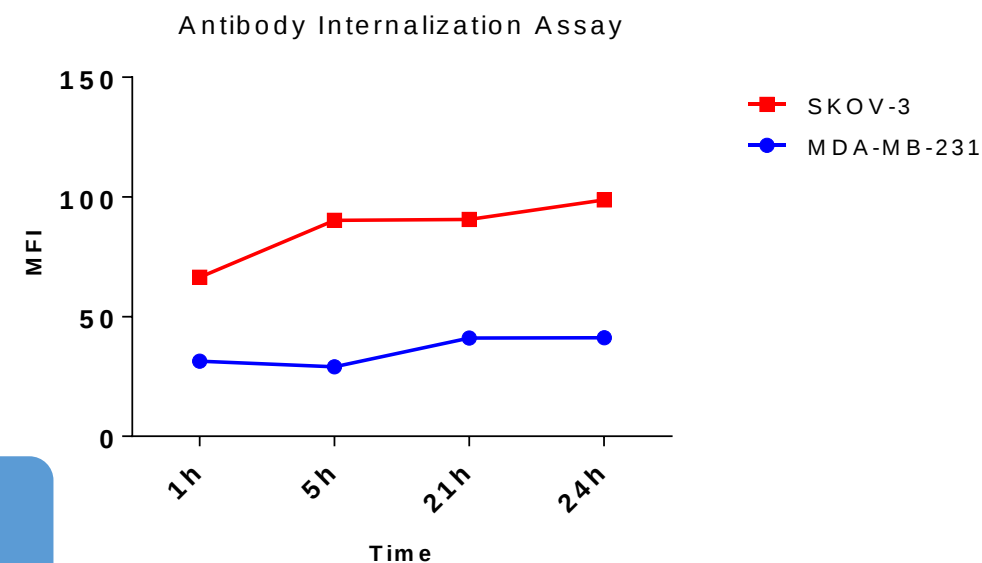
Antibody internalization assay



Prepare 4X Zenon working solution

Label and incubate cells

Analysis (FACS and Microscope)

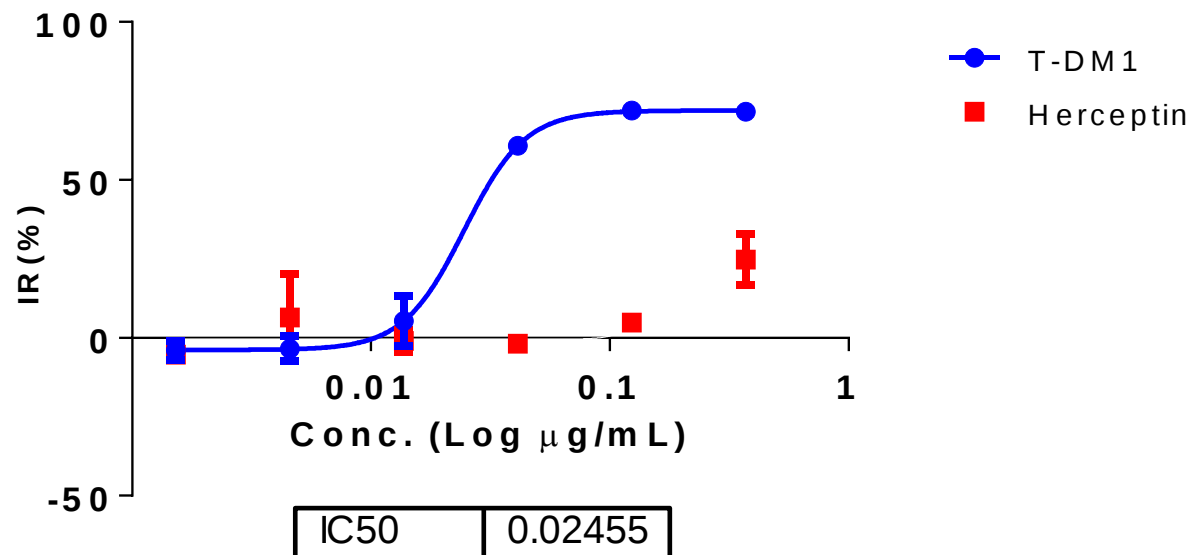


ThermoFisher
Pub.No.MAN0017436
Rev.B.0

ADC related *in vitro* assays

Cell viability assay_SK-BR-3

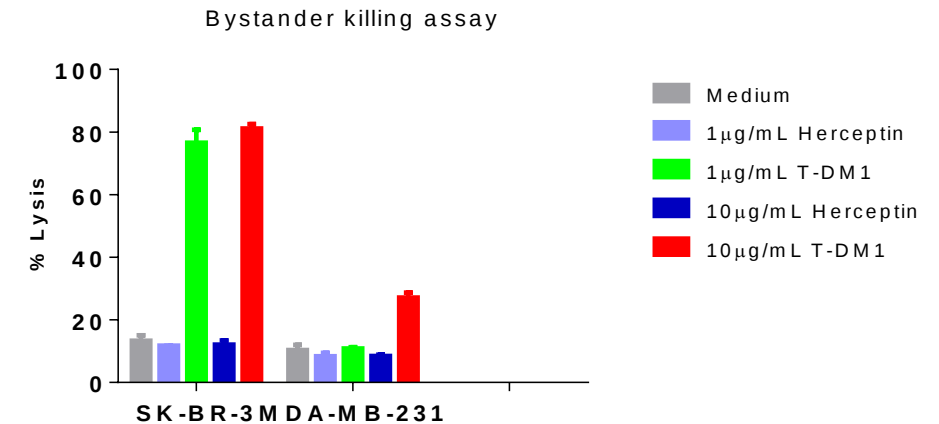
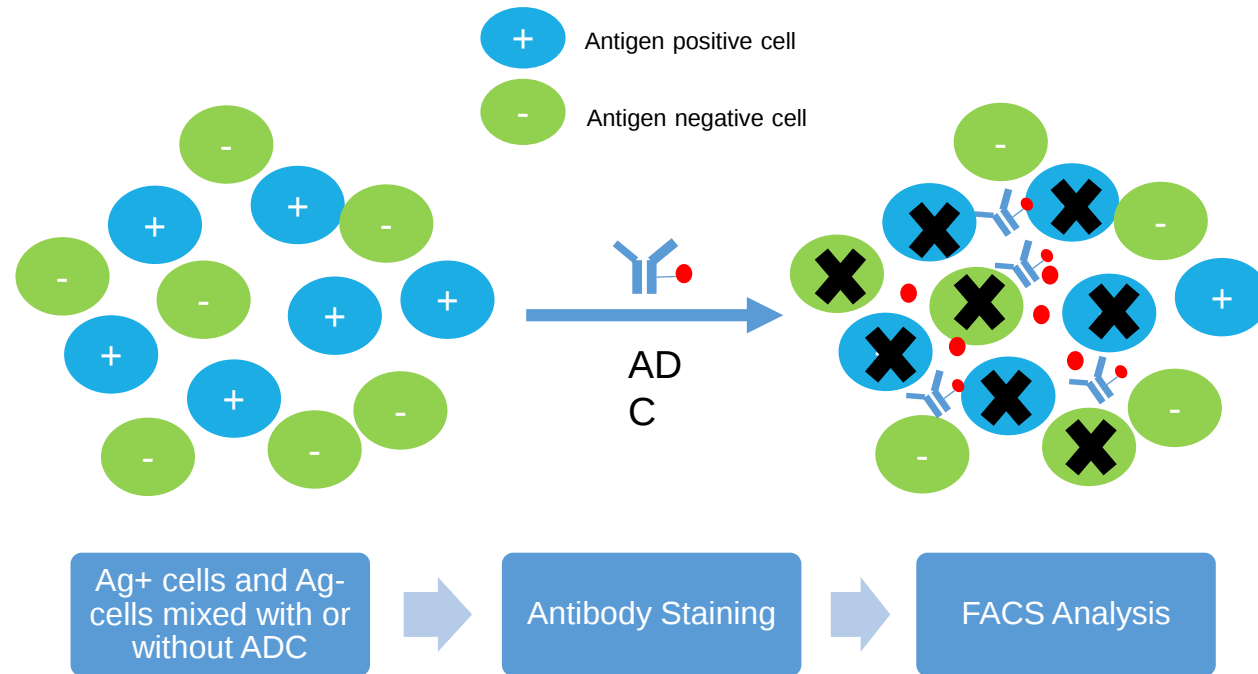
CTG assay on SK-BR-3 Cells



ADC related *in vitro* assays

Bystander Killing Assay

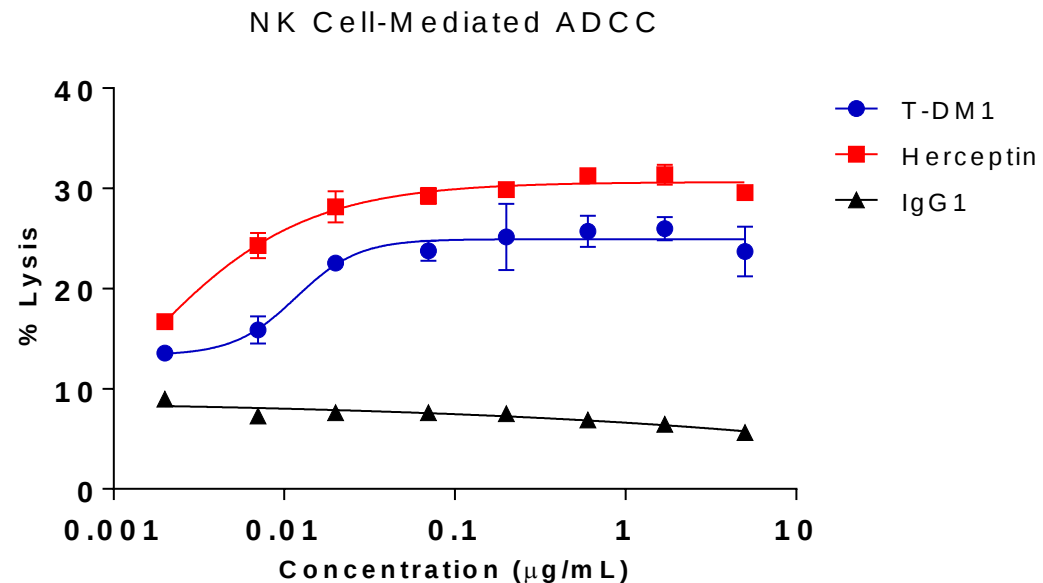
Bystander killing occurs when the drug from an ADC is released either from the target cell following internalization and degradation of the ADC or release of the drug within the extracellular space.



ADC related *in vitro* assays

Antibody-dependent cell-mediated cytotoxicity (ADCC)

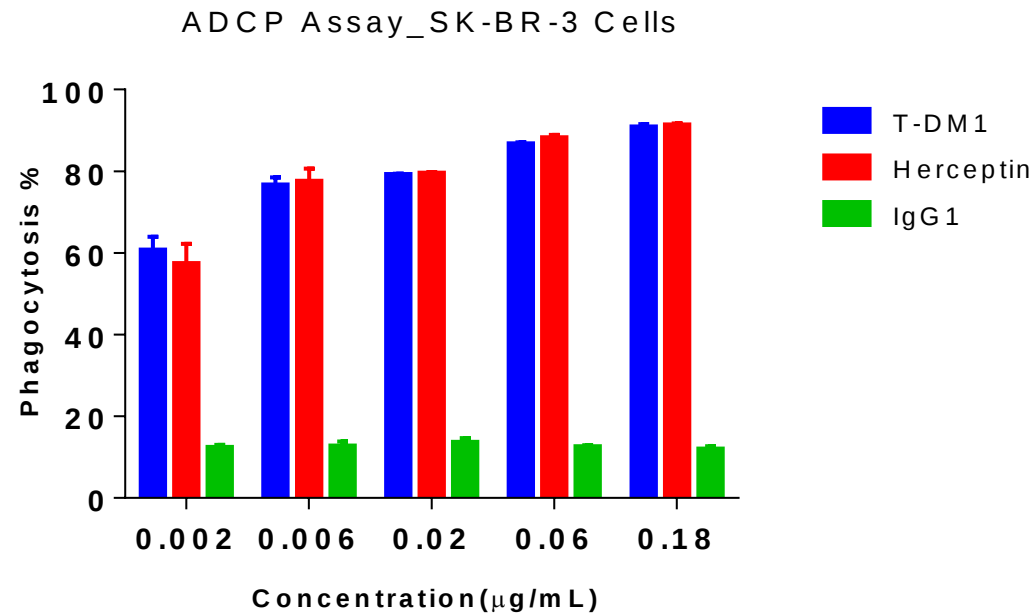
- Effector: NK cells isolated from PBMC of healthy donor
- Target: SK-BR-3 cell line, labeled with 50 nM CellTrace Far-Red
- E:T = 10:1



ADC related *in vitro* assays

Antibody-dependent cell-mediated phagocytosis (ADCP)

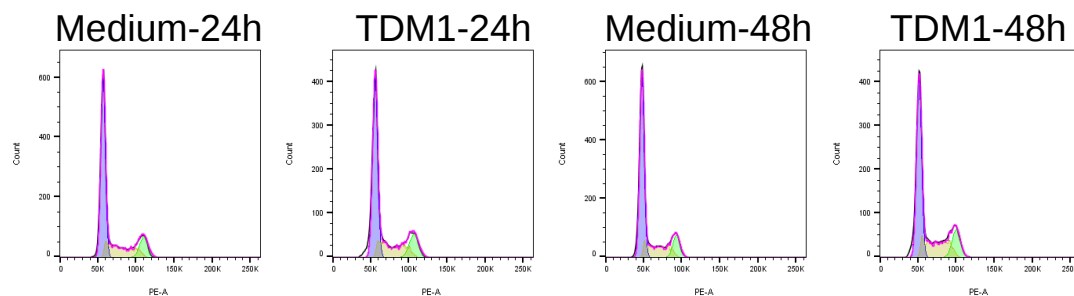
- Effector: Macrophage isolated from PBMC of healthy donor
- Target: SK-BR-3 cell line, labeled with 50 nM CellTrace Violet
- E:T= 8:1



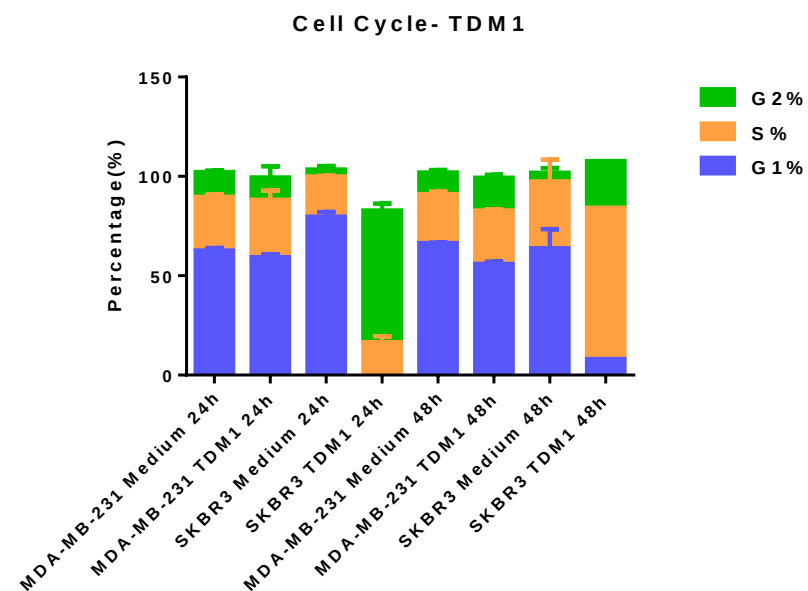
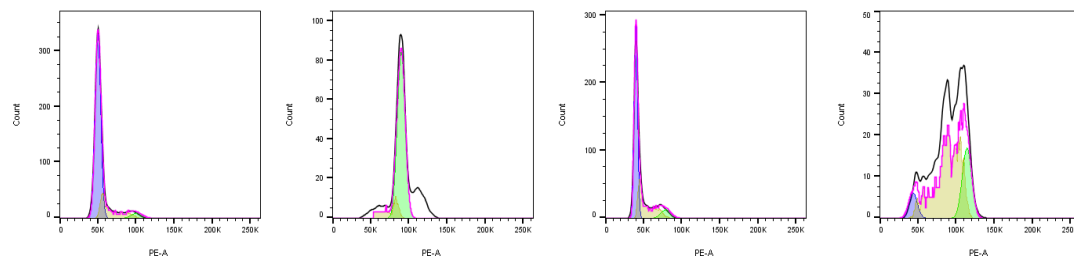
ADC related *in vitro* assays

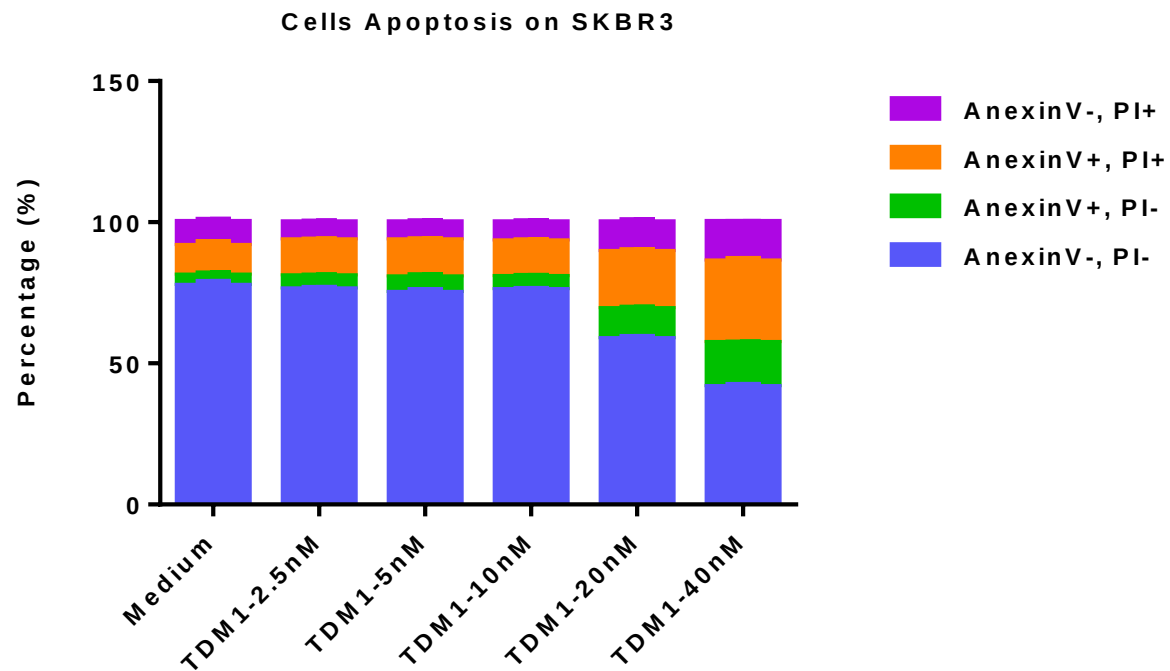
Cell Cycle

MDA-
MB-231



SKBR3





HER2 related *in vivo* models

Model type	Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	Drugs tested
CDX	Breast Cancer	HCC1954	Y	Yes	TDM1
CDX	Breast Cancer	MDA-MB-468	Y	Yes	TDM1
CDX	Gastric Cancer	NCI-N87	Y	Yes	TDM1
CDX	Ovarian Cancer	SKOV-3	Y	Yes	TDM1
CDX	Breast Cancer	BT474	Y	Yes	TDM1
PDX	Gastric Cancer	ST-02-0074	Y	Yes	TDM1
PDX	Gastric Cancer	ST-02-0077	Y	Yes	TDM1
PDX	Gastric Cancer	ST-02-0079	Y	Yes	TDM1
PDX	Gastric Cancer	ST-02-0103	Y	Yes	TDM1

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve
Gastric Cancer	NUGC4	Y	Yes

Engineered cell line/model overexpressing hCLDN18.2

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve
Pancreatic Cancer	CLDN18.2 /MIA PaCa-2	Y	Yes
Pancreatic Cancer	xCLDN18.2 /MIA PaCa-2	Y	Yes
Gastric Cancer	CLDN18.2 /NCI-N87	Y	Ongoing
Pancreatic Cancer	CLDN18.2 /BxPC3	Y	Ongoing

Note: xCLDN18.2 /MIA PaCa-2 was established from CLDN18.2 /MIA PaCa-2 which went through *in vivo* passage.

CLDN18.2 related PDX models with CLDN18 overexpression

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	CLDN 18 mRNA expression (FPKM)
Pancreatic Cancer	PC-07-0004	Y	Yes	895.0
Pancreatic Cancer	PC-07-0033	Y	Yes	864.5
Pancreatic Cancer	PC-07-0044	Y	Yes	694.6
Pancreatic Cancer	PC-07-0052	Y	Yes	558.1
Pancreatic Cancer	PC-07-0034	Y	Yes	516.7
Pancreatic Cancer	PC-07-0016	Y	Yes	483.1
Pancreatic Cancer	PC-07-0010	Y	Yes	427.5
Pancreatic Cancer	PC-07-0039	Y	Yes	351.5
Gastric Cancer	ST-02-0079	Y	Yes	710.2
Gastric Cancer	ST-02-0318	Y	Yes	657
Gastric Cancer	ST-02-0328	Y	Yes	484.5
Gastric Cancer	ST-02-0238	Y	Yes	419.5
Gastric Cancer	ST-02-0393	Y	Yes	407.6

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Myeloma	NCI-H929	Y	Yes	10.60609261
Myeloma	OPM-2	Y	Yes	8.342351289
Myeloma	MOLP-8	Y	Yes	7.464790639
Myeloma	MM.1S	Y	Yes	7.686022129
Myeloma	RPMI8226	Y	Yes	4.947497559
Myeloma	KMS11	Y	Yes	7.891140109
Myeloma	KMS28BM	Y	Yes	8.190513757
Lymphoma	Pfeiffer	Y	Yes	8.30570386
Lymphoma	SU-DHL-6	Y	Yes	5.518942442
Lymphoma	GRANTA-519	Y	Yes	5.445314606

CD79b related CDX models

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Lymphoma	DAUDI	Y	Yes	9.394413891
Lymphoma	NAMALWA	Y	Yes	9.62447019
Lymphoma	RAJI	Y	Yes	8.639387855
Lymphoma	SU-DHL-4	Y	Yes	8.551698054
Lymphoma	REC-1	Y	Yes	7.895601907
Lymphoma	MINO	Y	Yes	8.068081048
Lymphoma	RL	Y	Yes	9.461803654
Lymphoma	WSU-DLCL2	Y	Yes	8.631854355
Lymphoma	Pfeiffer	Y	Yes	10.53761122
Lymphoma	Toledo	Y	Yes	8.84484701
Lymphoma	JEKO-1	Y	Yes	9.528218244
Lymphoma	DOHH2	Y	Yes	8.082191606

CD19 related lymphoma CDX models

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Lymphoma	DAUDI	Y	Yes	6.647320738
Lymphoma	NAMALWA	Y	Yes	6.099809925
Lymphoma	RAJI	Y	Yes	6.717132721
Lymphoma	SU-DHL-4	Y	Yes	5.708682617
Lymphoma	REC-1	Y	Yes	6.38476307
Lymphoma	MINO	Y	Yes	6.845294594
Lymphoma	RL	Y	Yes	6.000860688
Lymphoma	WSU-DLCL2	Y	Yes	5.600382317
Lymphoma	Pfeiffer	Y	Yes	5.741763936
Lymphoma	Toledo	Y	Yes	6.362128571
Lymphoma	JEKO-1	Y	Yes	5.716236181
Lymphoma	DOHH2	Y	Yes	6.877477364
Lymphoma	SU-DHL-10	Y	Yes	4.850695617
Lymphoma	SU-DHL-6	Y	Yes	5.929750801
Lymphoma	GRANTA-519	Y	Yes	4.772756242

CD22 related lymphoma CDX models

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Lymphoma	DAUDI	Y	Yes	8.490393579
Lymphoma	NAMALWA	Y	Yes	4.689163872
Lymphoma	RAJI	Y	Yes	6.212843814
Lymphoma	SU-DHL-4	Y	Yes	8.156317974
Lymphoma	REC-1	Y	Yes	5.886004068
Lymphoma	SU-DHL-6	Y	Yes	7.118618432
Lymphoma	RL	Y	Yes	7.752113955
Lymphoma	WSU-DLCL2	Y	Yes	8.873262264
Lymphoma	Pfeiffer	Y	Yes	3.623416029
Lymphoma	Toledo	Y	Yes	3.55306113
Lymphoma	JEKO-1	Y	Yes	4.423855691
Lymphoma	DOHH2	Y	Yes	8.766965175
Lymphoma	SU-DHL-10	Y	Yes	8.543153393

CD37 related lymphoma CDX models

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Lymphoma	DAUDI	Y	Yes	8.385628621
Lymphoma	NAMALWA	Y	Yes	6.363011415
Lymphoma	RAJI	Y	Yes	6.530008933
Lymphoma	SU-DHL-4	Y	Yes	7.809466404
Lymphoma	REC-1	Y	Yes	7.282485693
Lymphoma	SU-DHL-6	Y	Yes	7.71435705
Lymphoma	RL	Y	Yes	6.608454723
Lymphoma	WSU-DLCL2	Y	Yes	7.725704188
Lymphoma	Pfeiffer	Y	Yes	7.343946761
Lymphoma	Toledo	Y	Yes	
Lymphoma	JEKO-1	Y	Yes	6.685591264
Lymphoma	DOHH2	Y	Yes	8.01581384
Lymphoma	SU-DHL-10	Y	Yes	7.885743006
Lymphoma	OCI-LY-3	Y	Yes	9.438677656
Lymphoma	U937	Y	Yes	6.866545829
Lymphoma	MINO	Y	Yes	6.545399456
Lymphoma	HUT78	Y	Yes	4.826233472
Lymphoma	GRANTA-519	OncoWuXi Newsletter	Yes	6.677810919

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Lymphoma	HUT78	Y	Yes	4.838592656
Lymphoma	SU-DHL-1	Y	Yes	5.739082282
Liver cancer	JHH7	Y	Yes	4.930410161
Lung cancer	NCI-H211	Y	Yes	2.6967635
Lung cancer	NCI-H460	Y	Yes	2.251811623

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Lymphoma	U937	Y	Yes	4.939325697
Lymphoma	RL	Y	Yes	3.584747621
Lymphoma	DOHH2	Y	Yes	3.614197596
Thyroid cancer	FTC-238	Y	Yes	3.548255846
Brain cancer	U118MG	Y	Yes	3.471290945
Brain cancer	U87MG	Y	Yes	2.218539587

Trop-2 related TNBC/ bladder cancer/ pancreas cancer CDX models

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Breast cancer	HCC70	Y	Yes	8.563674007
Breast cancer	MDA-MB-468	Y	Yes	8.290785679
Breast cancer	HCC1937	Y	Yes	8.695554452
Breast cancer	HCC1806	Y	Yes	8.001907402
Breast cancer	MDA-MB-231	Y	Yes	4.5013706
Breast cancer	DU4475	Y	Yes	1.223242993
Bladder cancer	VMCUB1	Y	Yes	10.19482718
Bladder cancer	HT1376	Y	Yes	9.365696487
Bladder cancer	RT112	Y	Yes	7.942311177
Bladder cancer	HT1197	Y	Yes	7.926090096
Bladder cancer	T24	Y	Yes	5.373696231
Bladder cancer	KU-19-19	Y	Yes	3.900775803
Pancreas cancer	BxPC-3	Y	Yes	9.107756322
Pancreas cancer	Panc 02.13	Y	Yes	10.1739941
Pancreas cancer	HPAC	Y	Yes	8.310000287
Pancreas cancer	CAPAN-1	Y	Yes	6.99773
Pancreas cancer	HPAFII	Y	Yes	8.102551159
Pancreas cancer	CFPAC-1	Y	Yes	8.675871559
Pancreas cancer	Panc 04.03	Y	Yes	8.429113109

Nectin-4 related bladder/ breast/ pancreas cancer CDX models

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Bladder cancer	HT1376	Y	Yes	6.566916674
Bladder cancer	VMCUB1	Y	Yes	4.773391978
Bladder cancer	HT1197	Y	Yes	3.895954355
Bladder cancer	RT112	Y	Yes	3.657780842
Breast cancer	HCC70	Y	Yes	5.169273613
Breast cancer	BT474	Y	Yes	4.642560207
Breast cancer	HCC1937	Y	Yes	3.781114639
Breast cancer	MCF-7	Y	Yes	3.018446916
Breast cancer	BT20	Y	Yes	2.961058118
Pancreas cancer	BxPC-3	Y	Yes	3.101033919
Pancreas cancer	PANC 04.03	Y	Yes	3.179811467
Pancreas cancer	CFPAC-1	Y	Yes	3.304873639
Pancreas cancer	CAPAN-1	Y	Yes	2.951823618

FOLR1 related ovarian/ breast cancer CDX models

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Ovarian cancer	OV90	Y	Yes	5.619871367
Ovarian cancer	SKOV3	Y	Yes	4.976318597
Ovarian cancer	OVCAR3	Y	Yes	2.821613625
Breast cancer	T47D	Y	Yes	5.589457195
Breast cancer	CAL51	Y	Yes	6.159677356
Breast cancer	HCC1937	Y	Yes	3.309840325

FOLH1 related prostate cancer CDX models

Cancer type	Model ID	Model availability at WuXi (Y/N)	Tumor growth curve	RPKM
Prostate cancer	22RV1	Y	Yes	5.18977269
Prostate cancer	VCAP	Y	Yes	7.109204012
Prostate cancer	LNCap FGC	Y	Yes	8.88620302



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