

# ADC-related platform for preclinical research



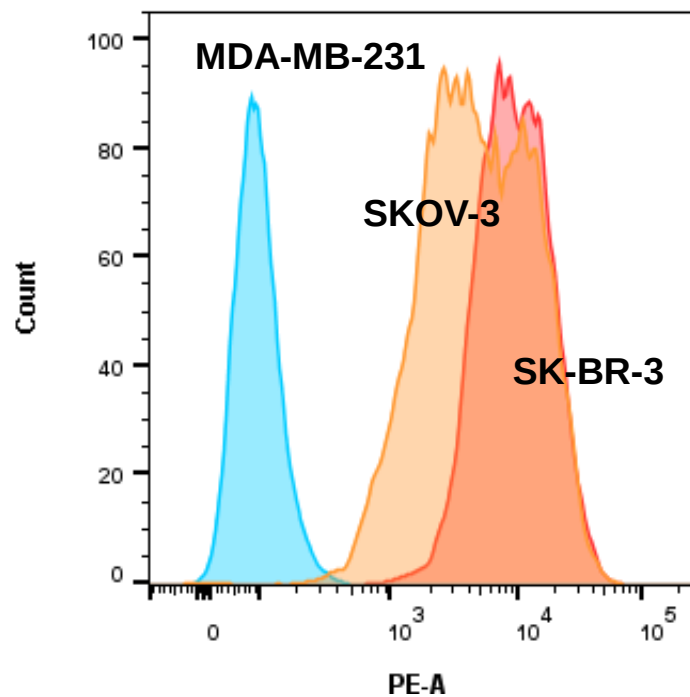
WuXi AppTec, WuXi Biology, Oncology & Immunology Unit



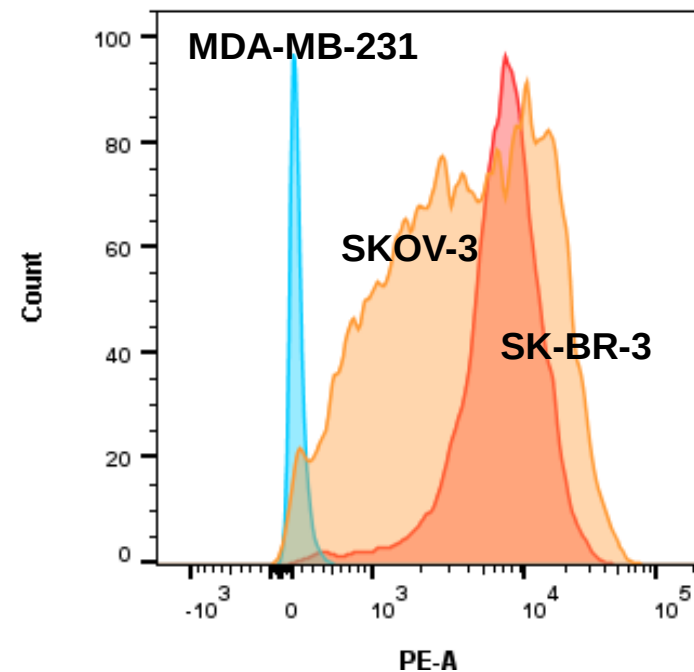
2022.01

## ADC related *in vitro* assays

Target validation and antibody binding assay



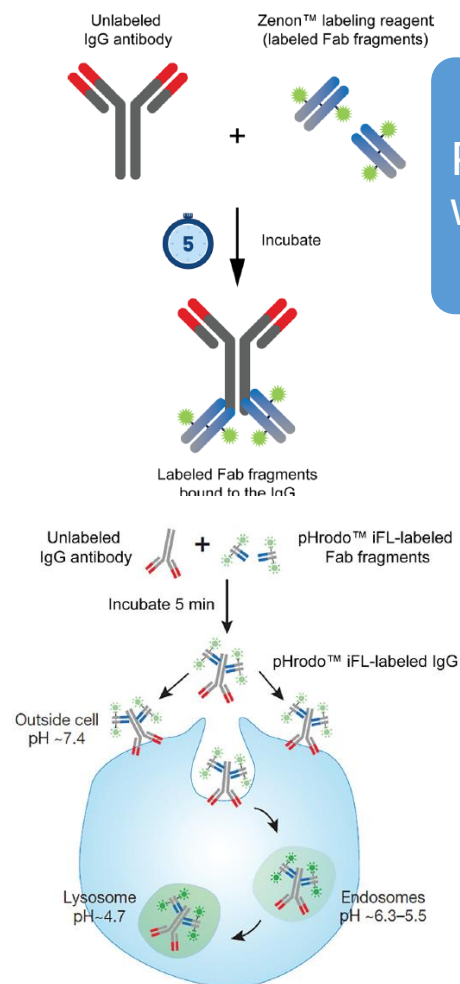
Herceptin



T-DM1

# ADC related *in vitro* assays

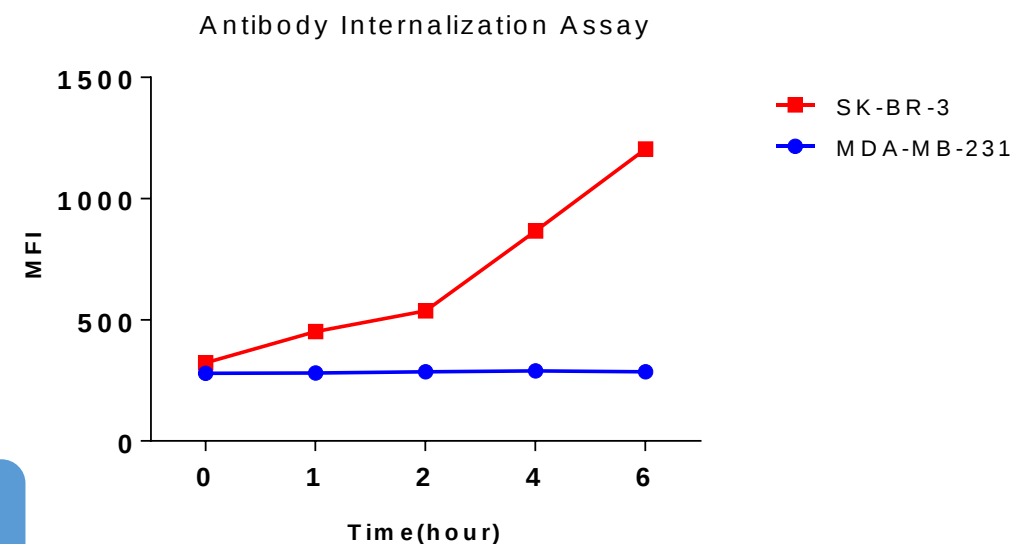
## Antibody internalization assay



Prepare 4X Zenon working solution

Label and incubate cells

Analysis (FACS and Microscope)

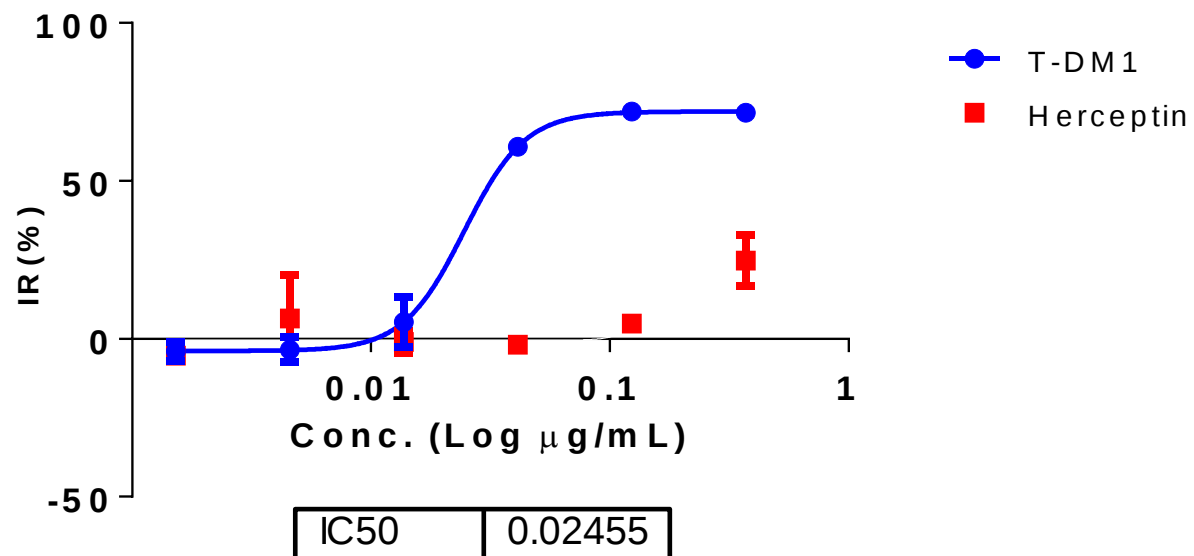


ThermoFisher  
Pub.No.MAN0017436  
Rev.B.0

## ADC related *in vitro* assays

Cell viability assay\_SK-BR-3

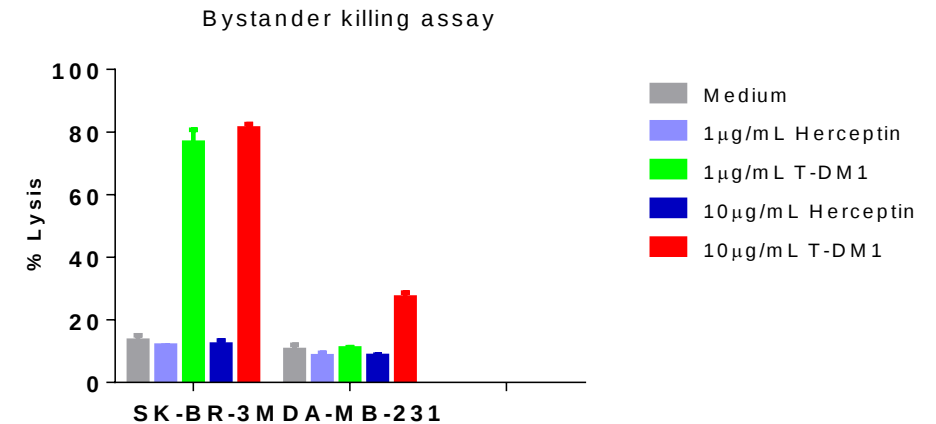
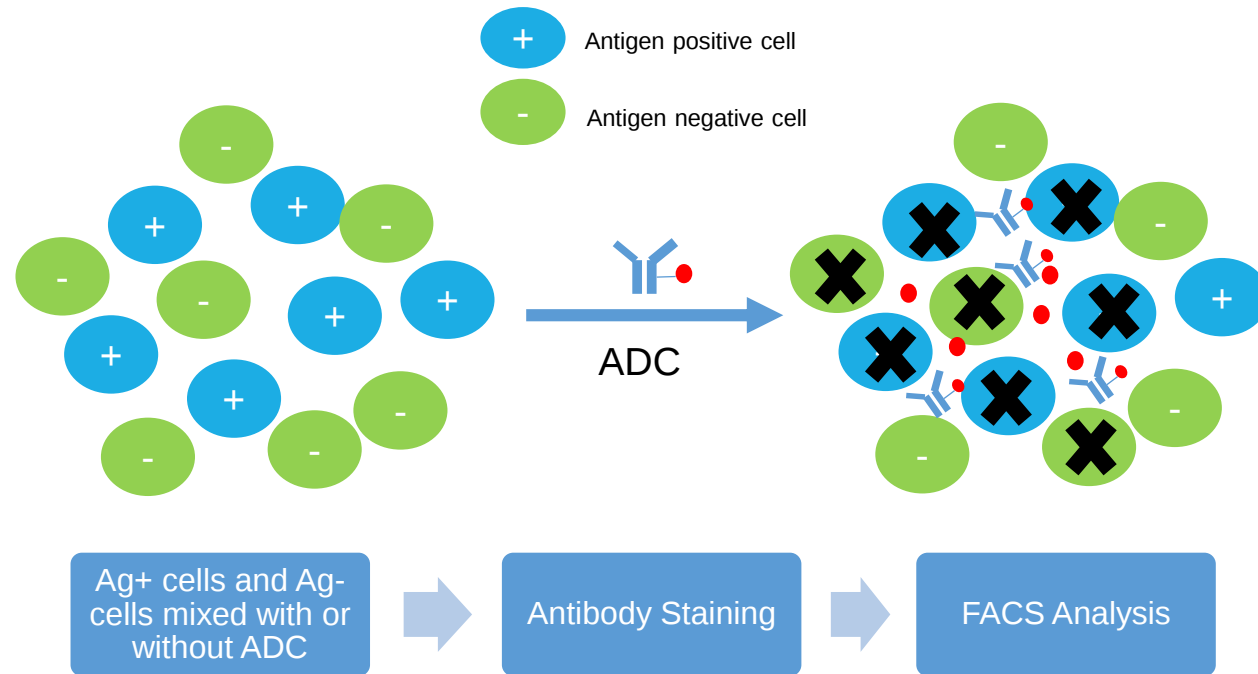
CTG assay on SK-BR-3 Cells



# ADC related *in vitro* assays

## Bystander Killing Assay

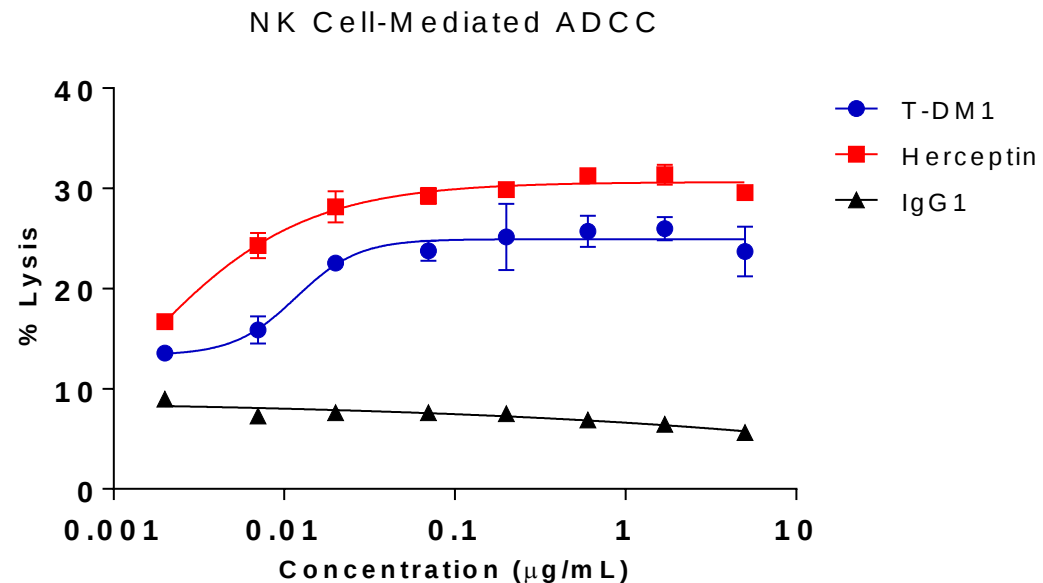
Bystander killing occurs when the drug from an ADC is released either from the target cell following internalization and degradation of the ADC or release of the drug within the extracellular space.



## ADC related *in vitro* assays

### Antibody-dependent cell-mediated cytotoxicity (ADCC)

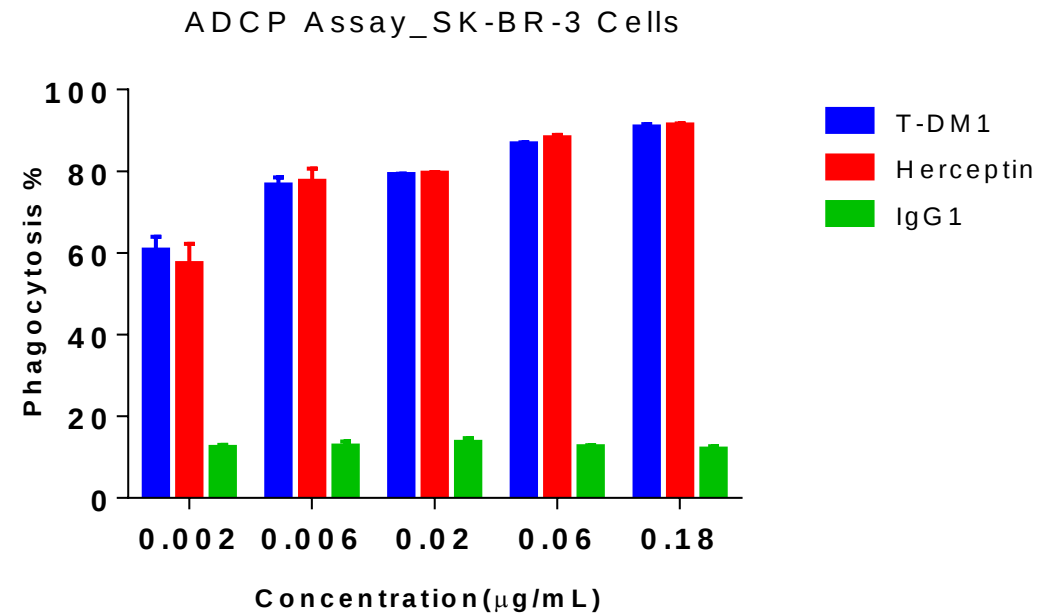
- Effector: NK cells isolated from PBMC of healthy donor
- Target: SK-BR-3 cell line, labeled with 50 nM CellTrace Far-Red
- E:T = 10:1



## ADC related *in vitro* assays

Antibody-dependent cell-mediated phagocytosis (ADCP)

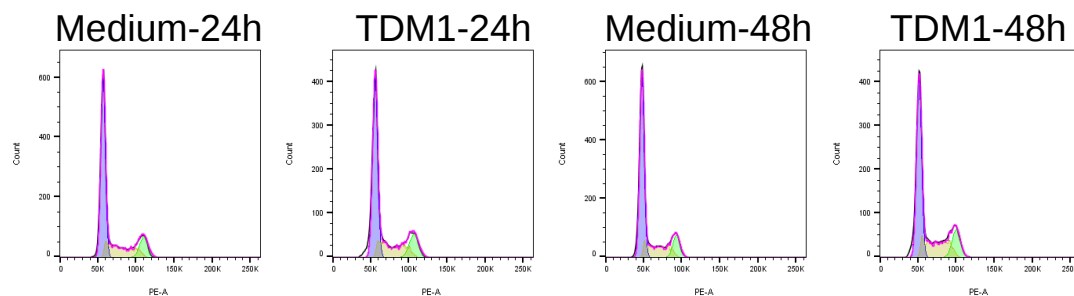
- Effector: Macrophage isolated from PBMC of healthy donor
- Target: SK-BR-3 cell line, labeled with 50 nM CellTrace Violet
- E:T= 8:1



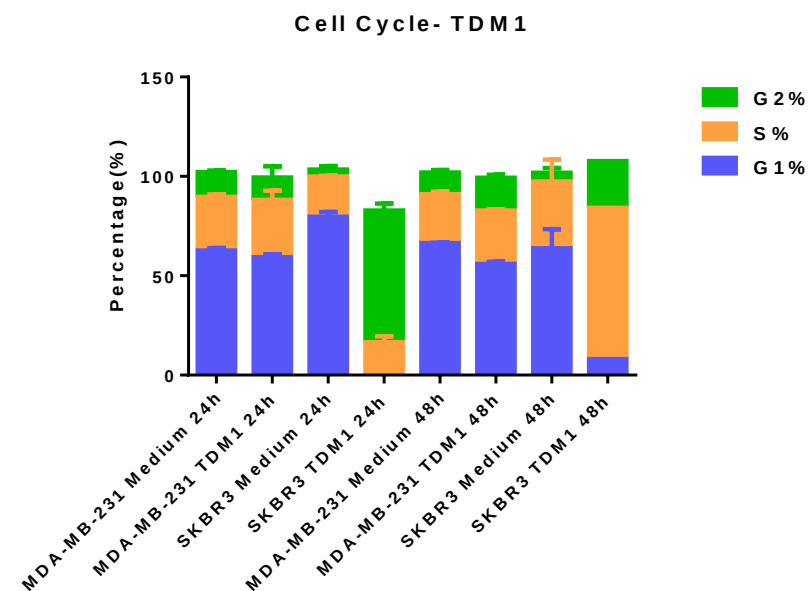
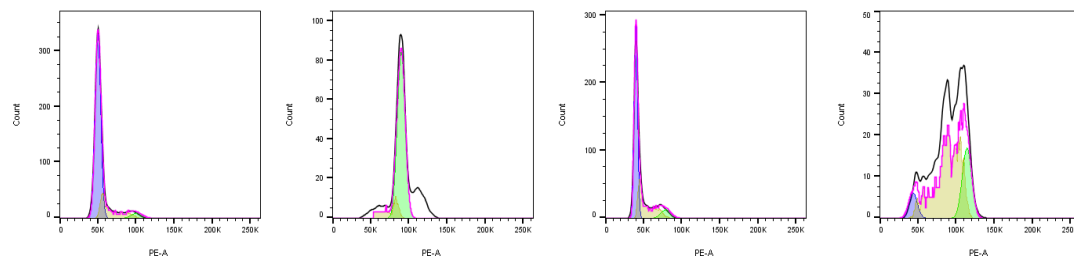
# ADC related *in vitro* assays

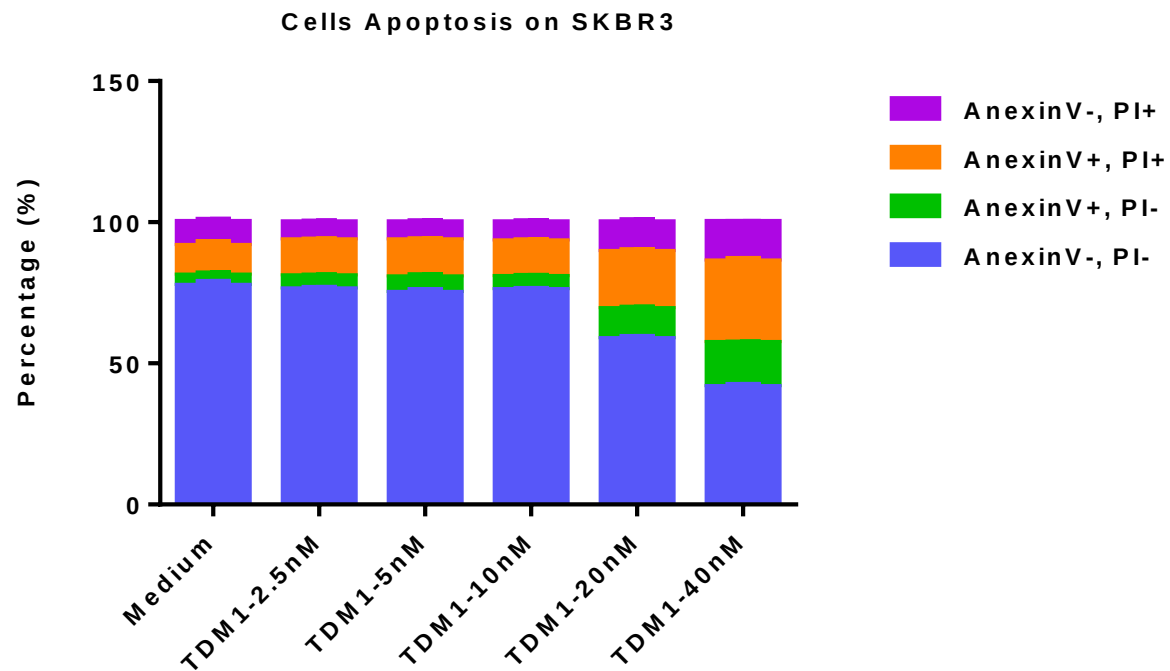
## Cell Cycle

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 |

All the RNAseq data were from CCLE (<http://www.broadinstitute.org/ccle>)

## 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    | Y                                | Yes                | 8.88620302  |



# OUR COMMITMENT

*Improving Health. Making a Difference.*

For questions and requests, please email to [info\\_onco@wuxiapptec.com](mailto:info_onco@wuxiapptec.com)



... W u X i ...

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