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KRISHGEN BioSystems
### OUR REAGENTS, YOUR RESEARCH

Therapeutic Targets in CAR-NK Cell Therapy

Natural killer (NK) cells are immune cells capable of killing target cells and can be genetically modified to express chimeric antigen receptors (CARs). CAR-NK cell therapy is an innovative type of cancer immunotherapy for solid tumors and hematological malignancies.

Functionally, CAR-NK cells kill target cancer cells in a CAR-dependent manner. Compared to traditional CAR-T cells, CAR-NK cells and unmodified NK cells offer safety advantages. The limited lifespan of CAR-NK cells greatly lowers the risk of on-target/off-tumor toxicity to normal cells. Additionally, reduced risk for alloreactivity and Graft versus host disease (GvHD) allows CAR-NK cells to be generated from a variety of sources, including NK92 cells, peripheral blood mononuclear cells (PBMCs), umbilical cord blood (UCB), and induced pluripotent stem cells (iPSCs).
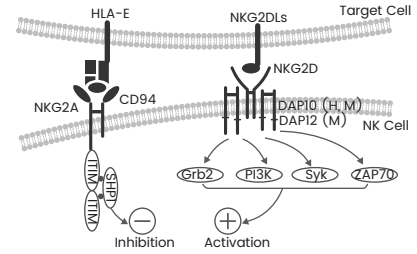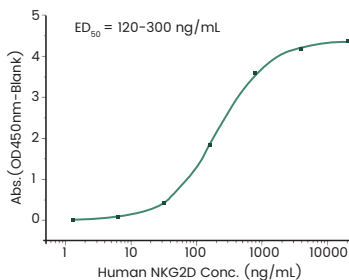

Solid Tumor CAR-NK Targets

NKG2D & NKG2D Ligands

NKG2D, an activating NK cell receptor, can regulate the cytotoxic potential of NK cells against cancer by interacting with its tumor-associated overexpression ligands, including MICA, MICB, and ULBPs (ULBP1, ULBP2, ULBP3, ULBP4, ULBP5, ULBP6). The NKG2D-NKG2D ligand pathway is a promising target for immunotherapy and presents a suitable foundation for NK-focused CAR design.
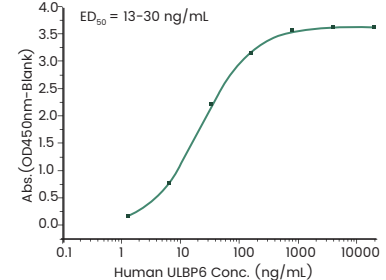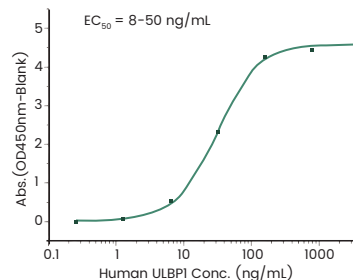
High Activity NKG2D and NKG2D Ligands Proteins from Various Species

Binding Activity Validated By ELISA Assay

Human NKG2D (Cat#: 10575-H01S)

ED_{50} = 120-300 ng/mL

Bind with Human MICA (Cat#: 12302-H08H)

Ligands Bind with NKG2D (Cat#: 10575-H07B)

EC_{50} = 8-50 ng/mL

Human ULBP1 (Cat#: 10679-H03H)

ED_{50} = 13-30 ng/mL

Human ULBP6 (Cat#: 15759-H02H)

A comprehensive panel of antibodies targeting NKG2D, MICA, MICB, ULBP1, and ULBP2 for various applications (FCM, ELISA, WB, IHC, IF, etc.)
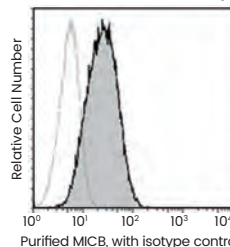
Anti-MICA Antibody
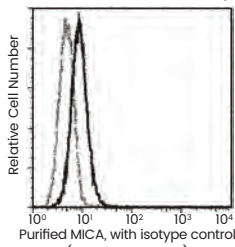
Flow Cytometric Analysis of Human MICA Expression on HeLa Cells
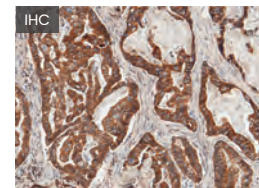
Cat#: 12302-MM04

Anti-MICB Antibody

Flow Cytometric Analysis of Anti-MICB on MCF-7 Cells

Cat#: 10759-MM12

Anti-ULBP2 Antibody, Rabbit mAb
Cat#: 12143-R022

Immunochemical Staining of Human ULBP2 in Human Gastric cancer Cells
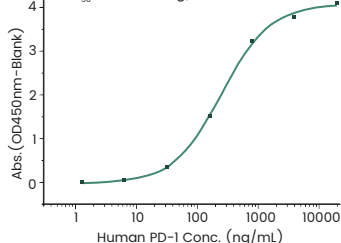
PD-L1

PD-L1 is upregulated in the tumor microenvironment and immunosuppressive cells in several cancer types. Preclinical tests showed that PD-L1 targeted CAR-NK cells have specific anti-tumor effects against 15 tumor cell lines in vitro and strong antitumor effects against triple-negative breast, bladder, and lung cancers in vivo.

High Activity Recombinant PD-L1

Human PD-L1 Protein
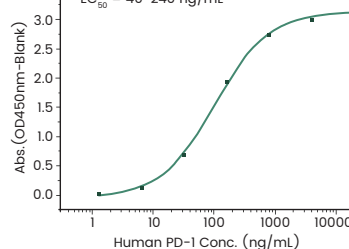**Cat#: 10084-H02H**

EC_{50} = 150-600 ng/mL

Immobilized human PD-1 (Cat#: 10377-H08H) can bind human PD-L1 by ELISA

Mouse PD-L1 Protein
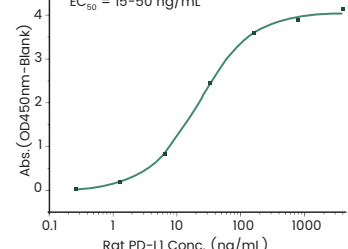**Cat#: 50010-M41H-B**

EC_{50} = 40-240 ng/mL

Immobilized Human PD-1 His & hFc (Cat#: 10377-H03H) at Mouse PD-L1 (Biotinylated)

Rat PD-L1 Protein
Cat#: 80450-R08H
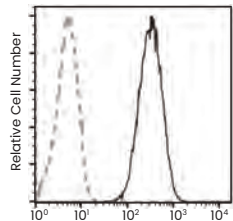

EC_{50} = 15-50 ng/mL

Immobilized Rat PD-L1 His can bind Rat PD-1 (Cat#: 80448-R02H)
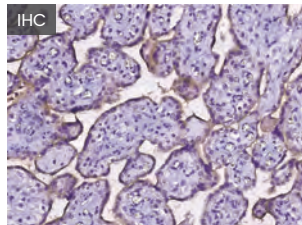
Therapeutic Targets in CAR-NK Cell Therapy

Application Validated Antibodies

Anti-PD-L1 Antibody（APC），Mouse mAb
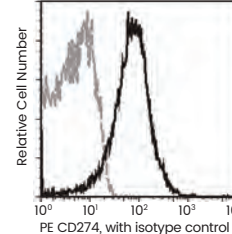Cat#: 10084-MM36-A

Flow cytometric analysis of Human PD-L1 expression on HCC827 cells

Anti-PD-L1 Antibody, Rabbit mAb
Cat#: 10084-T24

Immunochemical staining of human PD-L1 in human placenta cells

Anti-PD-L1 Antibody（PE），Rabbit mAb
Cat#: 50010-R485-P

Flow cytometric analysis of pd-L1 expression on spleen lymphocytes cells
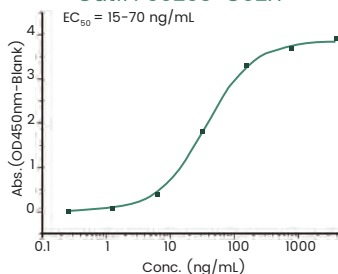
HER2/ERBB2

HER2/ERBB2 is frequently overexpressed on carcinomas such as breast, gastric, esophageal, ovarian, and endometrial cancers. HER2 is also expressed in 80% of glioblastomas and is associated with low survival rates. The applications of HER2-targeted CAR constructs are widely studied. HER2-specific NK cells are promising strategy for tumor adoptive immunotherapy.
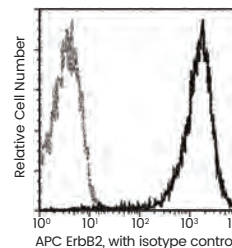
Human HER2 Protein
Cat#: 10004-H02H
EC_{50} = 16-80 ng/mL
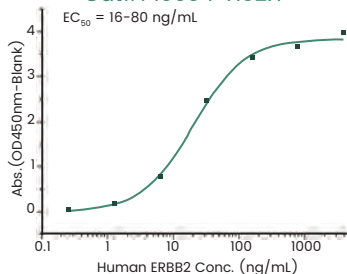
Immobilized ERBB2 Protein can bind Anti-ERBB2 Antibody

Cynomolgus HER2 Protein
Cat#: 90295-C02H
EC_{50} = 15-70 ng/mL

Immobilized Her2/ERBB2 Proteinbind Anti-Erbb2 Antibody（Trastuzumab）
(Cat#: 68046-H002)

Anti-HER2 Antibody（APC），Mouse mAb
Cat#: 10004-MM03-A

Flow cytometric analysis of anti-Human ErbB2 on SKBR3 cells

Mesothelin

Recombinant MSLN Proteins

Cat#	Species	Expressed Host	Purity	Tag
13128-H01H	Human	HEK293 Cells	> 95%	hFc
13128-H08H-B （Biotinylated）	Human	HEK293 Cells	> 95%	His
13128-H08H1	Human	HEK293 Cells	> 95%	His

PSMA

Recombinant PSMA Proteins

Cat#	Species	Expressed Host	Purity	Tag
15877-H07H	Human	HEK293 Cells	> 95%	His
15877-H07H-B （Biotinylated）	Human	HEK293 Cells	> 90%	His

Other Target Proteins:

BCMA | CD19 | CD 20 | CD 22 | CS1 | CD 38 | CD 138 | CD 33 | CD 123 | FLT3

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