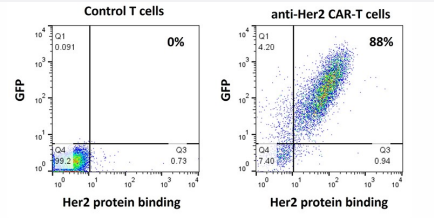
Human ERBB2 scFv-TM-4-1BB-CD3z (GFP)

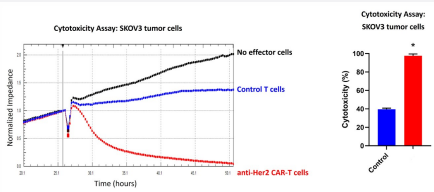
Catalog # U1094 Size 1 Tub

Applications



Flow Cytometry

The vast majority of CAR-T cells express eGFP (Y-axis) and the anti-HER2 CAR, detected with labeled HER2 protein (X-axis).



Cytotoxicity

CAR-T cells are significantly more cytotoxic than control T cells for SKOV3 tumor cells endogenously expressing HER2 ($p<0.0001$ by t test).

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CAR Structure

CAR domains. scFv: single chain variable fragment; TM: transmembrane domain.

Specification

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Product Description	Human CAR-T cells express an anti-HER2 CAR containing a HER2-specific scFv, hinge and transmembrane domains, the 4-1BB costimulatory domain and the CD3zeta activation domain, and additionally express eGFP driven by a separate promoter.
Package	$5x10^6$ Cells/mL
Transfected Cell Line	Primary T cells
Host	Human
Form	Liquid
Regulation Status	For research use only (RUO)
Culture Medium	DMEM + FBS + IL2
Storage Buffer	In 90% FBS, 10% DMSO
Storage Instruction	For long term storage store at liquid nitrogen storage. Aliquot to avoid repeated freezing and thawing.
Note	FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES OR THERAPEUTIC APPLICATIONS. CAR Structure CAR domains. scFv: single chain variable fragment; TM: transmembrane domain.

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Gene Info — ERBB2

Entrez GeneID	2064
Gene Name	ERBB2
Gene Alias	CD340, HER-2, HER-2/neu, HER2, NEU, NGL, TKR1
Gene Description	v-erb-b2 erythroblastic leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene homolog (avian)

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Omim ID	137215 137800 164870 211980
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a member of the epidermal growth factor (EGF) receptor family of receptor tyrosine kinases. This protein has no ligand binding domain of its own and therefore cannot bind growth factors. However, it does bind tightly to other ligand-bound EGF receptor family members to form a heterodimer, stabilizing ligand binding and enhancing kinase-mediated activation of downstream signalling pathways, such as those involving mitogen-activated protein kinase and phosphatidylinositol-3 kinase. Allelic variations at amino acid positions 654 and 655 of isoform a (positions 624 and 625 of isoform b) have been reported, with the most common allele, Ile654/Ile655, shown here. Amplification and/or overexpression of this gene has been reported in numerous cancers, including breast and ovarian tumors. Alternative splicing results in several additional transcript variants, some encoding different isoforms and others that have not been fully characterized. [provided by RefSeq
Other Designations	c-erb B2/neu protein|erbB-2|herstatin|neuroblastoma/glioblastoma derived oncogene homolog|v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 2 (neuro/glioblastoma derived oncogene homolog)

Pathway

- Adherens junction
- Bladder cancer
- Calcium signaling pathway
- Endometrial cancer
- ErbB signaling pathway
- Focal adhesion
- Non-small cell lung cancer
- Pancreatic cancer
- Pathways in cancer
- Prostate cancer

Disease

- Adenocarcinoma
- Ataxia telangiectasia

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- Brain Neoplasms
- Breast cancer
- Breast Neoplasms
- Carcinoma
- Cell Transformation
- Cleft Lip
- Cleft Palate
- Colorectal Neoplasms
- Disease Progression
- Endometrial Neoplasms
- Esophageal Neoplasms
- Fibroadenoma
- Gastritis
- Genetic Predisposition to Disease
- Glioma
- Head and Neck Neoplasms
- Heart Diseases
- Kidney Failure
- Laryngeal Neoplasms
- Lung Neoplasms
- Lymphatic Metastasis
- Mouth Neoplasms
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms

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- Obesity
- Ovarian cancer
- Ovarian Neoplasms
- Pancreatic cancer
- Pancreatic Neoplasms
- Papillomavirus Infections
- Pharyngeal Neoplasms
- Prostate cancer
- Prostatic Hyperplasia
- Prostatic Neoplasms
- Pulmonary Disease
- Skin Neoplasms
- Stomach Neoplasms
- Thyroid Neoplasms
- Tooth Abnormalities
- Urinary Bladder Neoplasms
- Uterine Cervical Neoplasms
- Werner syndrome

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