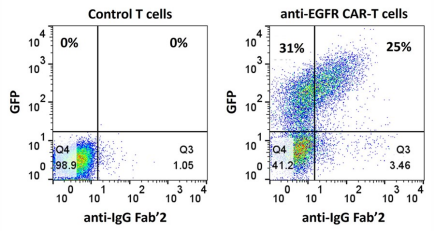
Human EGFR scFv-TM-4-1BB-CD3z (GFP)

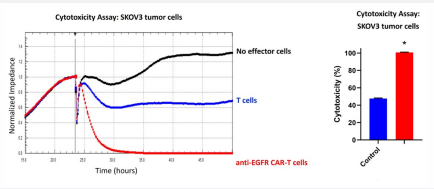
Catalog # U1139 Size 1 Tub

Applications



Flow Cytometry

A large subset of CAR-T cells express eGFP (Y-axis) and the anti-EGFR CAR, detected with an antibody specific for human IgG Fab'2 sequences present in the scFv (X-axis)



Cytotoxicity

CAR-T cells are significantly more cytotoxic than control T cells for SKOV3 tumor cells endogenously expressing EGFR ($p<0.0001$ 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-EGFR CAR containing an EGFR-specific scFv, hinge and trans membrane domains, the 4-1BB costimulatory domain and the CD3zeta activation domain, and additi onally express eGFP driven by a second promoter.
Package	$1x10^6$ Cells/mL
Transfected Cell Line	Primary T cells
Host	Human
Form	Liquid
Regulation Status	For in vitro 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 THERAPEUTI C APPLICATIONS. CAR Structure CAR domains. scFv: single chain variable fragment; TM: transmembrane domain.

Applications

- Flow Cytometry

  A large subset of CAR-T cells express eGFP (Y-axis) and the anti-EGFR CAR, detected with an antibody specific for human IgG Fab'2 sequences present in the scFv (X-axis)

- Cytotoxicity

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

Gene Info — EGFR

Entrez GeneID	1956
Gene Name	EGFR
Gene Alias	ERBB, ERBB1, HER1, PIG61, mENA

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Gene Description	epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian)
Omim ID	131550 211980
Gene Ontology	Hyperlink
Gene Summary	The protein encoded by this gene is a transmembrane glycoprotein that is a member of the protei n kinase superfamily. This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surface protein that binds to epidermal growth factor. Binding of the protein to a lig and induces receptor dimerization and tyrosine autophosphorylation and leads to cell proliferation . Mutations in this gene are associated with lung cancer. [provided by RefSeq
Other Designations	avian erythroblastic leukemia viral (v-erb-b) oncogene homolog|cell growth inhibiting protein 40|ce ll proliferation-inducing protein 61|epidermal growth factor receptor

Pathway

- Adherens junction
- Bladder cancer
- Calcium signaling pathway
- Colorectal cancer
- Cytokine-cytokine receptor interaction
- Dorso-ventral axis formation
- Endocytosis
- Endometrial cancer
- Epithelial cell signaling in Helicobacter pylori infection
- ErbB signaling pathway
- Focal adhesion
- Gap junction
- Glioma
- GnRH signaling pathway
- MAPK signaling pathway
- Melanoma

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- Non-small cell lung cancer
- Pancreatic cancer
- Pathways in cancer
- Prostate cancer
- Regulation of actin cytoskeleton

Disease

- Adenocarcinoma
- Anus Neoplasms
- Asthma
- Astrocytoma
- Atherosclerosis
- Barrett Esophagus
- Bile Duct Neoplasms
- Biliary Tract Neoplasms
- Bipolar Disorder
- Brain Neoplasms
- Breast cancer
- Breast Neoplasms
- Bronchial Hyperreactivity
- Carcinoma
- Cardiomyopathy
- Cardiovascular Diseases
- Cell Transformation
- Central Nervous System Neoplasms
- Cervical Intraepithelial Neoplasia

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- Cholangiocarcinoma
- Chromosome Aberrations
- Chromosome Deletion
- Cleft Lip
- Cleft Palate
- Cocarcinogenesis
- Colon cancer
- Colonic Neoplasms
- Colorectal Neoplasms
- Cystadenocarcinoma
- Diabetes Mellitus
- Diarrhea
- Disease Progression
- Disease Susceptibility
- DNA Damage
- Drug Eruptions
- Drug Toxicity
- Edema
- Endometrial Neoplasms
- Endometriosis
- Esophageal Neoplasms
- Exanthema
- Genetic Diseases
- Genetic Predisposition to Disease
- Glioblastoma
- Glioma

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- Head and Neck Neoplasms
- Hepatitis C
- HIV Infections
- Hyperparathyroidism
- Hypersensitivity
- Hypopharyngeal Neoplasms
- Kidney Failure
- Kidney Neoplasms
- Liver Diseases
- Liver Neoplasms
- Lung carcinoma
- Lung Neoplasms
- Lupus Erythematosus
- Lymphatic Metastasis
- Mental Disorders
- Mouth Neoplasms
- Myoma
- Nasopharyngeal Neoplasms
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Osteosarcoma
- Otorhinolaryngologic Neoplasms
- Ovarian cancer
- Ovarian Neoplasms

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- Pancreatic cancer
- Pancreatic Neoplasms
- Papillomavirus Infections
- Polycystic Kidney
- Polycystic kidney disease
- Precancerous Conditions
- Prostate cancer
- Prostatic Hyperplasia
- Prostatic Neoplasms
- Pulmonary Disease
- Ras oncogene
- Rectal Neoplasms
- Recurrence
- Skin Neoplasms
- Small Cell Lung Carcinoma
- Stomach Neoplasms
- Thyroid Neoplasms
- Tongue Neoplasms
- Tonsillar Neoplasms
- Urinary Bladder Neoplasms
- Urinary Calculi
- Uterine Cervical Neoplasms
- Uterine Neoplasms
- Viremia
- Werner syndrome

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