Anti-CEA-CAR T for the Treatment of Solid Tumor

Overview

Drug Name	Anti-CEA-CAR T
Description	A cell therapy consisting of carcino-embryonic antigen (CEA)-targeted chimeric antigen receptor T cells is in early clinical trials for the treatment of CEA-positive solid tumors, such as lung, colorectal, gastric, breast and pancreatic cancers.
Target	CEACAM5
Drug Modality	CAR T cells
Indication	Solid Tumor
Product Category	Cancer Immunotherapy
Mechanism of Action	Carcino-embryonic antigen (CEA)-targeted CAR-T cells
Status	Phase I
Patent	Granted

Seeking Global Cooperation

Protheragen Inc. is actively seeking partnership for Anti-CEA-CAR T. Potential collaboration can be strategic alliance, licensing, or marketing agreement.
We look forward to hearing from you.

Target

Carcinoembryonic Antigen-Related Cell Adhesion Molecule 5 (CEACAM5)

This gene encodes a cell surface glycoprotein that represents the founding member of the carcinoembryonic antigen (CEA) family of proteins. The encoded protein is used as a clinical biomarker for gastrointestinal cancers and may promote tumor development through its role as a cell adhesion molecule. Additionally, the encoded protein may regulate differentiation, apoptosis, and cell polarity. This gene is present in a CEA family

gene cluster on chromosome 19.

Indication

Solid Tumor

Solid tumors are abnormal mass of tissue that usually does not contain cysts or liquid areas. Solid tumors may be benign or malignant. Different types of solid tumors are named for the type of cells that form them, such as breast cancer. Based on projections, cancer deaths will continue to rise with an estimated 11.4 million people dying from cancer in 2030.

The best strategy for fighting cancer is prevention to reduce cancer risk. Nevertheless, even if we were to apply all that we know about preventing cancer, one out of four cancers would still occur. Because of this, therapies that target malignancies after they have developed will continue to be important for some time to come. The most commonly used treatment modalities for cancer include some combination of surgery, radiation therapy, and chemotherapy. The best approach to treating cancer provides a balance between therapeutic effectiveness and minimization of treatment-associated side effects.

The global market for solid tumor cancer treatment was estimated at $121.3 billion in 2018 and is expected to reach $424.6 billion by 2027, increasing to CAGR by 15.0 per cent from 2019 to 2027.

Breast cancer is dominant in the indication market for the treatment of solid tumor cancer. Breast cancer is the second most common cancer in women after lung cancer. In 2018, there will be about 2.1 million newly diagnosed cases over the world. Incidence rates of breast cancer have been rising for most countries over the last decades, with some of the most rapid increases occurring in South America, Africa, and Asia.

Mechanism of Action

Carcino-embryonic antigen (CEA)-targeted CAR-T cells

Molecular Mechanism	Targeting Carcinoembryonic Antigen-Related Cell Adhesion Molecule 5 (CEACAM5)

Status

The Status of Anti-CEA-CAR T

The international patent applications under the PCT have been granted.

	Discovery/Optimization	Preclinical	Clinical
Anti-CEA-CAR T			

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