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Proteona launches CAR T characterization product based on ESCAPETM

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Proteona Pte. Ltd. has announced the launch of its latest ESCAPE™ proteogenomics assay designed specifically for Chimeric Antigen Receptor (CAR)T cell characterization. This is the first commercial product designed to characterize both RNA and protein expression levels across thousands of single CART cells.

Through the use of simultaneous gene and protein expression analysis, the ESCAPE™ CAR T assay is able to identify CAR positive cells, measure changes in cytokine expression,deeply phenotype cells through measuring the expression of 25 key cell surface proteins and discover new gene expression patterns important for your research. Together with Proteona's state-of-the-art data analysis support, the ESCAPE™ CAR T assay provides rich information that can be used at all stages of the CAR T workflow, from initial cell collection to post infusion patient monitoring.

The Proteona CART assay is based on the Enhanced Single Cell Analysis with Protein Expression (ESCAPE^{TM}) RNA sequencing technology, which uses DNA-barcoded antibodies to capture proteomic and gene expression data simultaneously at the single cell level.

CAR T cells area promising therapy against aggressive blood cancers and solid tumors. They are manufactured from T cells, immune cells that are able to recognize specific markers on pathogens or abnormal cells and destroy them. To manufacture CAR T, human T cells are harvested and then modified to target specific cancer antigens, so that they are able to find and kill cancer cells once infused back to the patient.

CAR T manufacturing is a complex process, and there is a large range of variations in patient response in terms of toxicity and efficacy. It is still not clear what the mechanisms are that determine the safety and functionality of CAR T cell treatment. The new CAR T ESCAPE™assay now provides the most comprehensive tool to shed light on the complex CAR T mechanisms, opening a new path for the development of safer cell therapies.

The Enhanced Single Cell Analysis with Protein Expression, ESCAPE™ platform, the first commercial service for measuring both gene and protein expression at the single cell level, is a customizable platform with current pre-set panels available for measuring multiple cell types.