

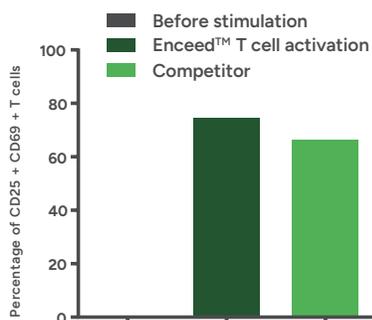


# Enceed™ T Cell Activation Reagent

GenScript's Enceed™ T cell Activation reagent induces activation and expansion of T cells (human) in enriched T cell populations or PBMCs. The Enceed™ T cell Activation reagent is composed of matrix of nanoparticles conjugated with anti-human CD3 and anti-human CD28 antibodies, which stimulate efficient T cell activation and expansion. The reagent is gentle on T cells, ensuring viability of activated cells. The small sized particulate structure of the activation reagent enables its easy removal by media washing or centrifugation.

## Efficient CD3/CD28 T Cell Activation

The activation signal (CD25&CD69) is efficiently induced by Enceed™ T cell activation reagent



PBMCs were isolated using CytoSinct™ CD4 Nanobeads, human (RUO) (Cat# L00863) and CytoSinct™ CD8 Nanobeads, human (RUO) (Cat# L00864), then activated using T cell activation reagents from both GenScript and a competitor. After 48 hours, the expression of the activation marker (CD25 and CD69) on the cell surface was detected via flow cytometry. The Enceed™ T cell activation reagent activated larger percentage of the cell population compare to the reagent from popular competitor.

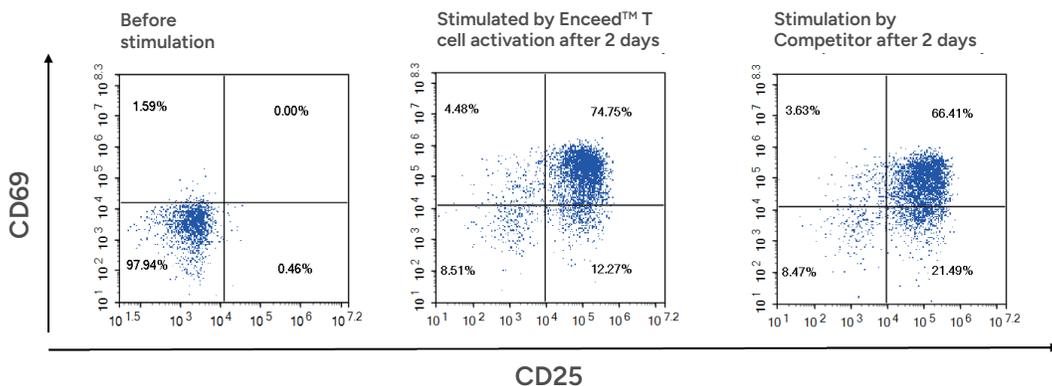


Figure 1. Comparison of the activation marker expression on day 2 between using Enceed™ T cell activation reagent and competitor product according to activation markers CD25 and CD69.

# High Cell Expansion and Viability after Activation

## T cells show higher expansion rate after activated by Enceed™ T cell activation reagent

PBMCs were isolated using CytoSinct™ CD4 Nanobeads, human (RUO) (Cat# L00863) and CytoSinct™ CD8 Nanobeads, human (RUO) (Cat# L00864), then activated using T cell activation reagents from both GenScript and a competitor, and cultured for as long as 17 days. The number of cells and % viability were monitored on day 0, 2, 5, 9, 12, 14 and 17. The results show that using the T cell activation reagent from GenScript gives higher expansion rate and comparable viability of the post-activated cells compared to similar product from a competitor.

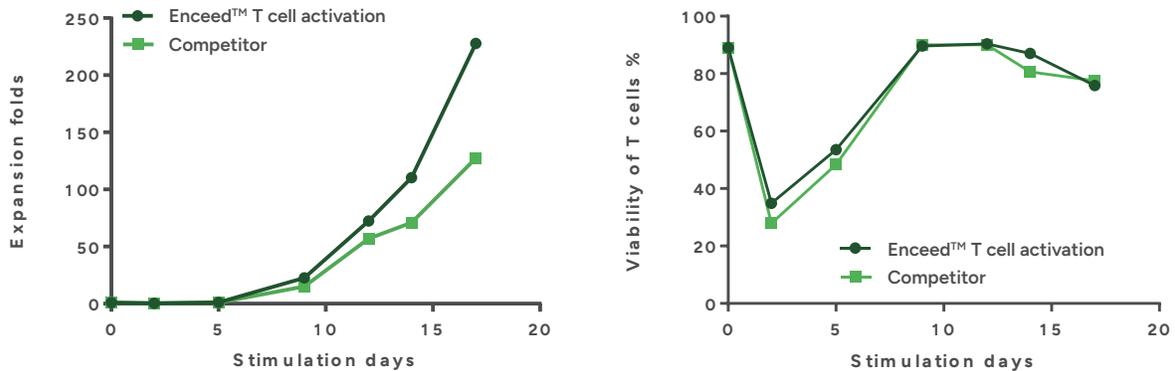


Figure 2. Comparison of the T cell expansion (left chart) and the T cell viability (right chart) between using Enceed™ T cell activation reagent and the competitor's product.

# T Cell Subpopulation Distribution after Activation

## Less differentiated T cell subsets ( $T_{SCM} + T_{CM}$ ) take a large population after expansion

PBMCs were isolated using CytoSinct™ CD4 Nanobeads, human (RUO) (Cat# L00863) and CytoSinct™ CD8 nanobeads, human (RUO) (Cat# L00864), then activated using T cell activation reagents from both GenScript and competitor, and cultured for a certain period of time. The surface markers were detected on day 12 and day 17 via flow cytometry to display the T cell subpopulations after the activation.

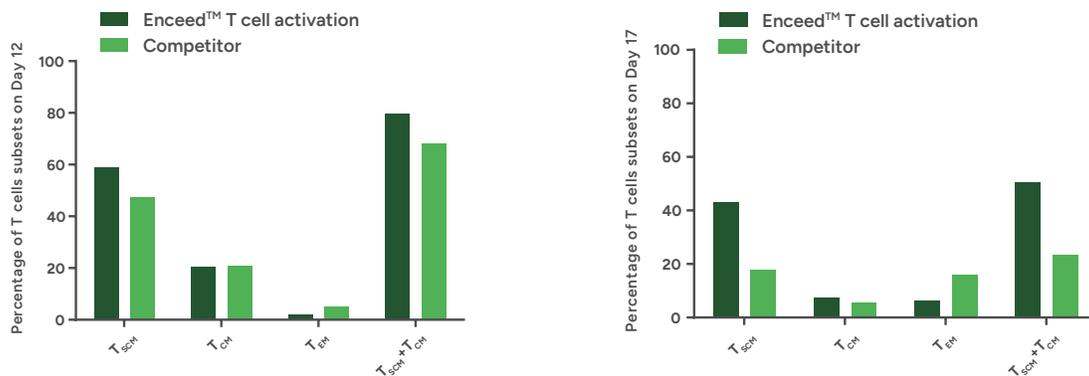


Figure 3. Comparison of T cell subpopulations on day 12 (left chart) and day 17 (right chart) between Enceed™ T cell activation reagent and competitor product, according to flow cytometry via the detection of different surface marker.