

# Validation data for bsAb CD3-CD28

Bispecific antibody (bsAb) against human CD3 and human CD28 for T cell expansion

For research use only

Version 24G17-AK

InvivoGen's bsAb CD3-CD28 is designed to activate and expand enriched T cell populations or peripheral blood mononuclear cells (PBMCs). This bispecific antibody (bsAb) is a dimer of a fusion protein comprising tandem single-chain variable fragments (scFv)<sub>2</sub> from two monoclonal antibodies (mAbs) targeting the human (h) CD3 and hCD28 receptors at the cell surface of T lymphocytes. The ability of bsAb CD3-CD28 to activate and expand CD4<sup>+</sup> T cells, as well as PBMCs, has been validated by imaging (Figure 1), T cell expansion analysis (Figure 2), as well as flow cytometry (Figure 3).

## Morphology of activated T cells

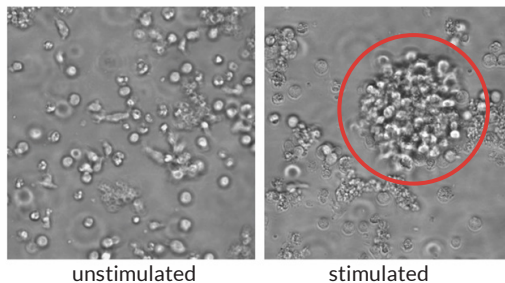


Figure 1. Activated Morphology of human T Cells. Morphology of unstimulated (left) and activated human T cells (right) after 48 h of stimulation with bsAb CD3-CD28.

## Comparison of T cell expansion

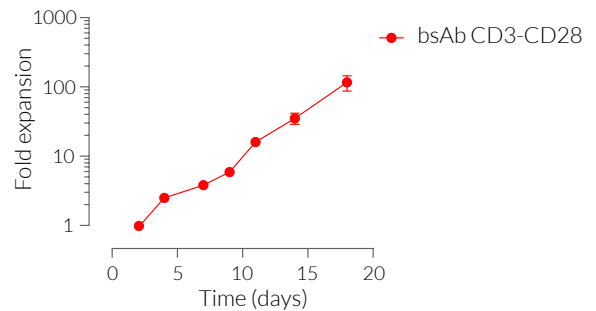


Figure 2. Human T cell expansion. Isolated human T cells were expanded over 25 days with bsAb CD3-CD28 in RPMI medium supplemented with IL-2. Viable cells were counted on days 2, 4, 7, 9, 11, 14, and 18 (mean  $\pm$  SEM in 8 experiments with 2 donors).

## CD25 CD69 expression

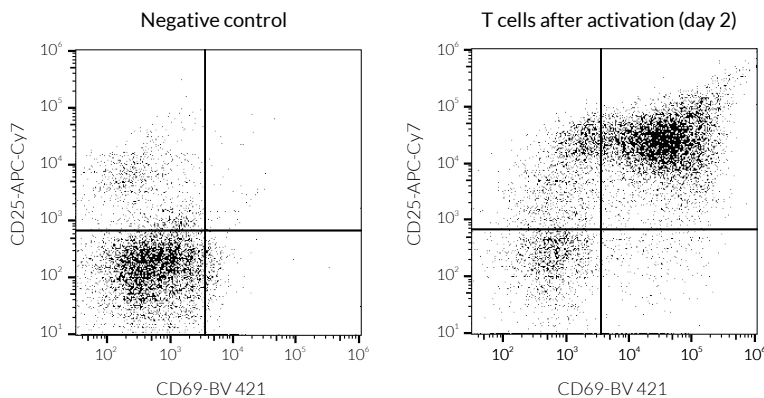


Figure 3. CD25 & CD69 cell surface staining after T cell activation. Isolated human T cells were activated for 48 h using bsAb CD3-CD28 in RPMI medium supplemented with IL-2. The negative control T cells were not activated. Cells were fluorescently stained using CD25-APC-Cy7 and CD69-BV 421, and subsequently analyzed using flow cytometry.

### TECHNICAL SUPPORT

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