ActCel T Cell Activation Reagent

Product Name

English Name： ActCel T Cell Activation Reagent

Packaging Specifications

Filling Volume/CatalugueNumber： 1mL / TL-6001-1000

Product Performance

Reactivity Species: Human

Endotoxin: < 2 EU/mL

Appearance: Brown liquid

Intended Use

ActCel T Cell Activation Reagent is synthesized by conjugating anti-human CD3 and CD28 antibodies to a nanomatrix. It enables gentle and efficient activation of T cells or peripheral blood mononuclear cells (PBMCs) for *in vitro* research applications.

Instructions for Use

Experimental Steps:

1.1 Perform experiments at a 1:200 dilution ratio. Refer to the table below for specific reagent volumes based on culture plate format:

Culture Plate	Maximum Culture Volume	Total T Cell Count	Volume of Reagent per Well
96-well	0.2 mL	0.3×10^6	1 µL
48-well	1 mL	1×10^6	5 µL
24-well	2 mL	2×10^6	10 µL
12-well	4 mL	4×10^6	20 µL
6-well	5 mL	5×10^6	25 µL

1.2 Example for 1×10^6 T Cells: Resuspend 1×10^6 T cells in 995 µL X-VIVO™ 15 medium. Add 5 µL ActCel T Cell Activation Reagent (containing 200 IU/mL IL-2). Incubate at 37°C, 5% CO_2 for 48 hours.

1.3 After 2–3 days, centrifuge cells at 300g for 10 minutes. Discard supernatant. Add 2 mL fresh complete medium to remove residual reagent. Continue incubation at 37°C, 5% CO_2.

1.4 Every 2 days, gently resuspend cells and supplement with fresh complete medium at a 1:2 ratio (e.g., add 4 mL medium to 2 mL original volume on Day 4). Count cells to calculate expansion folds. Maintain culture under standard conditions (37°C, 5% CO_2).

Key Notes:

1. Thoroughly mix the reagent with cells during incubation to enhance activation efficiency.
2. Adjust reagent dilution ratio within 1:100–300 based on experimental requirements.

3. Centrifugation time for reagent removal may be optimized per user needs.
4. Prior to use, centrifuge the product at 1000 rpm for 1 minute to pellet residual beads adhering to the tube cap.

Precautions

This product is intended for *in vitro* cell culture only. Do not use directly in clinical therapy.

Storage Conditions

2-8℃

Expiration Date

6 months

References

Chandler NJ, Call MJ, Call ME. T Cell Activation Machinery: Form and Function in Natural and Engineered Immune Receptors. International Journal of Molecular Sciences. 2020; 21(19):7424. https://doi.org/10.3390/ijms21197424.