

T Xpan™ Cell Activator (CD3/CD28/CD2)

Cat.No. TM139 | Research Use Only (RUO)

PRODUCT DESCRIPTION

T Xpan™ Cell Activator (CD3/CD28/CD2) is a high-performance human T cell activation reagent designed to deliver robust activation and expansion of primary human T cells through simultaneous CD3, CD28, and CD2 stimulation. By providing physiologically relevant co-stimulatory signaling through CD3, CD28, and CD2 receptors, TM139 promotes robust T cell activation, proliferation, clustering, and survival while maintaining high cell viability. Clear activation morphology can typically be observed within 24–48 hours following stimulation.

PRODUCT SNAPSHOT

Product Name	T Xpan™ Cell Activator (CD3/CD28/CD2)
Cat.No.	TM139
Volume	500 µL
Regulatory	Research Use Only (RUO)
Sterility	Negative
Storage	Store at -20°C
Lead Time	2–3 business days

Note 1: Avoid repeated freeze-thaw cycles.

RECOMMENDED APPLICATIONS

- Primary human T cell activation
- CAR-T and TCR-T Workflow Development
- Cytokine Secretion Studies
- T Cell Proliferation Assays
- Immunomodulatory Screening
- Ex vivo T cell expansion
- Immune cell functional analysis

KEY FEATURES

- Triple co-stimulation via CD3, CD28, and CD2 receptors
- Visible T cell cluster formation within 24–48 hours post-activation
- Maintains high viability during activation
- Suitable for research and preclinical application
- Rapid activation of primary human T cells
- Soluble, no bead formulation compatible with suspension culture
- Inclusion of CD2 co-stimulation may support enhanced activation, proliferation, and functional maintenance of primary human T cell

DATA

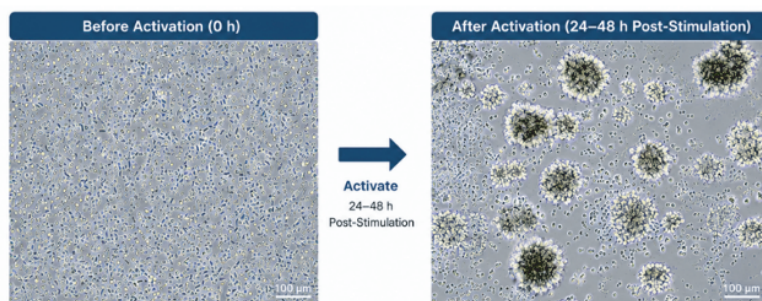


Figure 1. Activation of T cells. Resting human T cells are predominantly single cells with a round morphology. T cells (1×10^6 cells/mL) were activated with 2 µL of TM139 per 1×10^6 cells/mL. Cells were incubated for 24 or 48h. Activated T cells formed clear clusters and aggregates indicating robust activation and proliferation.

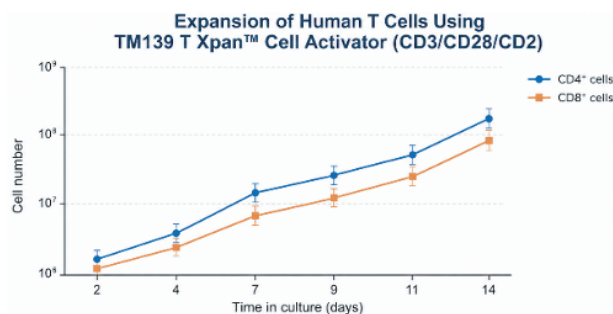


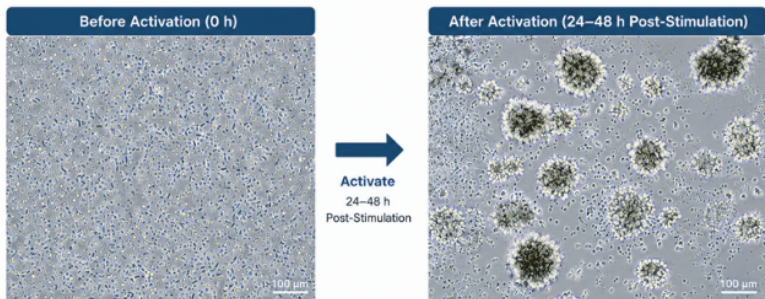
Figure 2. Human peripheral blood T cells were activated with TM139 and expanded in supplemented RPMI medium containing FBS, β-mercaptoethanol, sodium pyruvate, NEAA, and rhIL-2. Cells were cultured at 37°C in 5% CO₂, and representative results are shown.

Validation Data

ORDERING INFORMATION – RELATED PRODUCTS

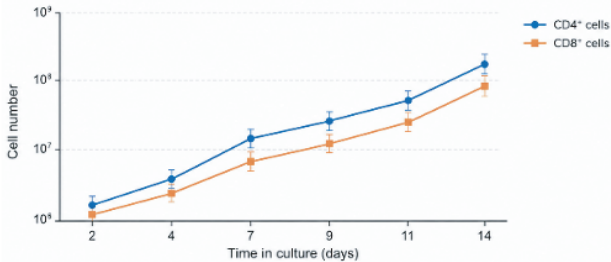
Product Name	Cat. No.	Format
T Xpan™ Cell Activator (CD3/CD28/CD2)	TM139	500 µL
Non-Essential Amino Acids (100x)	TM086	100 mL
RPMI 1640 Medium	TM503	500 mL
Recombinant Human IL2	Z101235	50 µg
Recombinant Human IL7 (E.coli)	Z100975	10 µg
Recombinant Human IL15 (E.coli)	Z100455	10 µg
Jurkat, Clone E6-1	T1061	1 x 10 ⁶ cells/mL
PrimGrow T Xpan™ Medium Kit	TM182	1 Kit





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Expansion of Human T Cells Using TM139 T Xpan™ Cell Activator (CD3/CD28/CD2)



Human peripheral blood T cells were activated with TM139 and expanded in supplemented RPMI medium containing FBS, β -mercaptoethanol, sodium pyruvate, NEAA, and rhIL-2. Cells were cultured at 37°C in 5% CO₂, and representative results are shown.