SARTORIUS

Product Datasheet

4Cell® Nutri-T Medium

A Xeno-Free, Serum-Free Medium for the Cultivation of Lymphocytes Offering Superior Performance and Flexibility

Product Information

4Cell® Nutri-T Medium: A Solution Without Serum
Cell-based immunotherapy is at the forefront of advanced cancer treatments. The most common cell-based immuno-therapies to date are T cell therapies (mainly CAR-Ts and TILs). Cells being used for immunotherapy are commonly cultured in media supplemented with human serum. The use of serum introduces further variability into the process due to donor-to-donor variation, which leads to inconsistent cell growth and characteristics. Eliminating serum simplifies the process, lowers the regulatory risk, and reduces the associated logistical burden. Nutri-T eliminates this need for serum addition by substituting serum's critical components with specific proteins, lipids, and other small molecules.

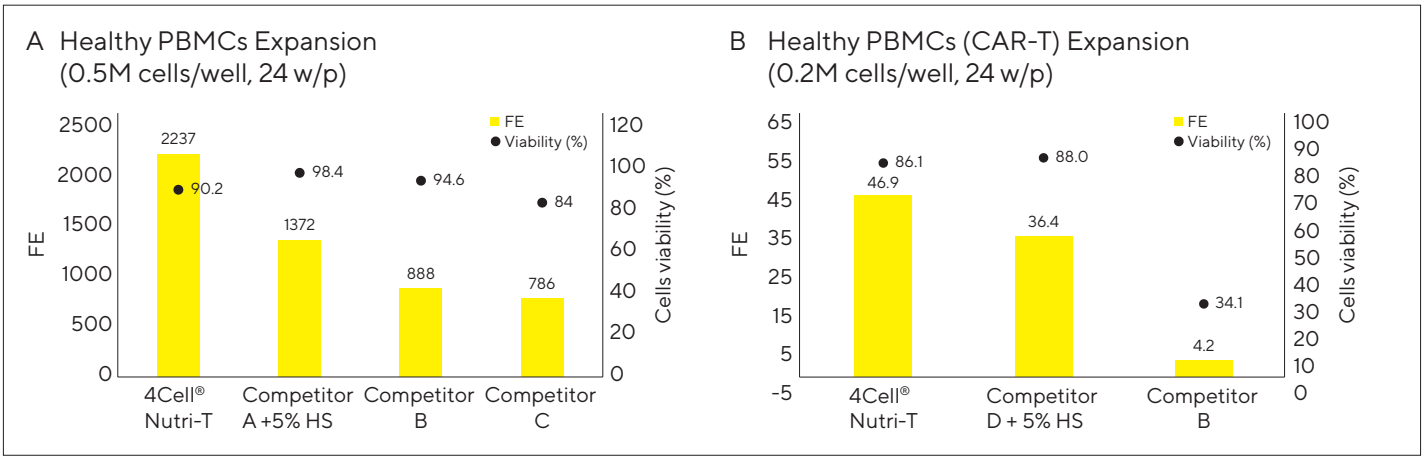
Product Snapshot

- Xeno-free
- Serum-free. No need to add serum
- ISO13408 Regulatory Compliance
- Research use only
- Developed using actual cancer patient cells
- Excellent performance for PBMCs, TILs, CAR-T
- Excellent performance at low initial seeding densities

4Cell® Nuti-T Cell Medium: Advancing Research and Clinical Applications

4Cell® Nutri-T is the ideal medium to use in the development and scale-up of cell-based therapeutic applications in the field of immune-oncology. Nutri-T is a xeno-free formulation demonstrating consistent and accurate results for both healthy donors (Fig. 1) and patient-derived (Fig. 2) T cells, without serum supplementation.

Figure 1: Nutri-T is Superior to Competitor Media in Expansion of Healthy PBMCs (With and Without CAR-T Transduction) at Multiple Seeding Densities



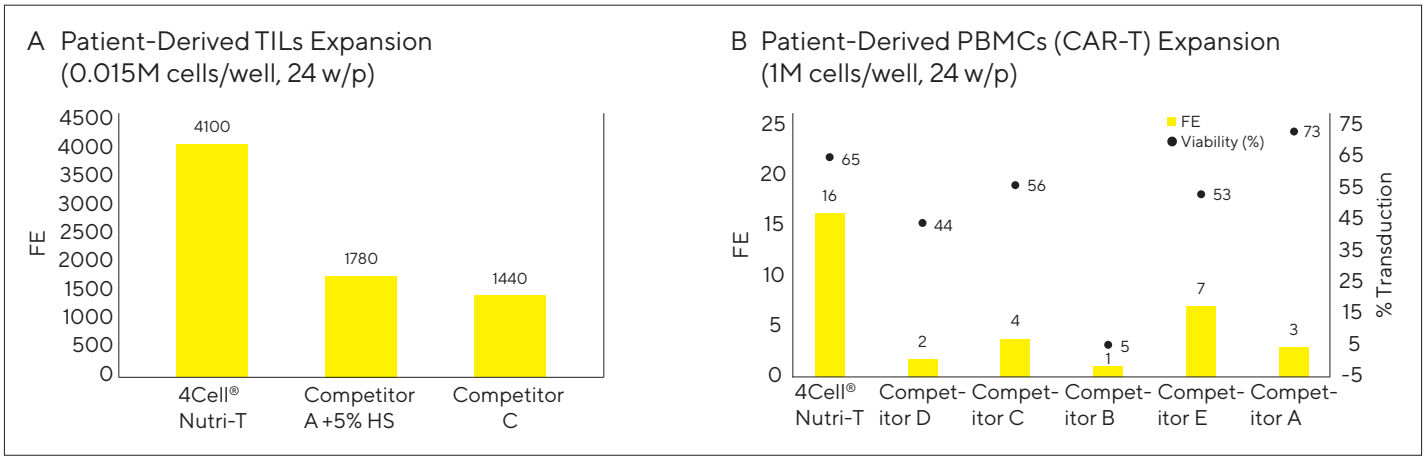
(A) 0.5M healthy donor PBMCs were seeded in 24w plates (2 ml media/well). Cells were activated with TransAct 1:100 and 600 IU/ml IL-2. Cells were split and media renewed every 2 – 3 days. Fold expansion (FE) and cell viability were measured at Day 11.

(B) 0.2M PBMCs from healthy donors were seeded in 24w plates (2 ml media/well). Cells were activated with TransAct 1:100 and 600 IU/ml IL-2. 24 h. After seeding cells were transduced with a lentiviral vector expressing an EGFR-CAR-T. Cells were split and media renewed every 2 – 3 days. FE and cell viability were measured at Day 11.

4Cell® Nutri-T Medium: Excellent Performance With Patient-Derived Cancer T Cells

Most of the currently available xeno-free media for T cells have been validated only on cells isolated from healthy donor derived PBMCs, or healthy CAR-T manipulated cells. 4Cell® Nutri-T was developed in collaboration with the highly accredited Ella Lemelbaum Institute for Immuno-Oncology at Sheba Medical Center, Israel. The Sheba partnership allows Sartorius access to clinical, patient-derived TILs and T cells. This unique development platform resulted in 4Cell® Nutri-T medium exhibiting excellent performance even with clinical condition cells at low initial seeding concentrations (Fig. 2).

Figure 2: Nutri-T is Superior to Competitor Media in Expansion of Patient-Derived Cancer Cells for Both TILs and CAR-T Processes



(A) TILs were isolated from a melanoma patient. 15,000 cells were seeded in a 24 well plate (2 ml/well) with PBMCs (1:100). Cells were activated with IL-2 (3,000 IU/ml) and OKT-3 (50 ng/ml). 2 ml and 4 ml of fresh medium + IL2 were added at days 5 and 7 respectively (total volume of 8 ml). Fold expansion was measured at 14 days. Inherent variations among primary T lymphocyte donor populations may result in varying outcomes.

(B) PBMCs were separated from peripheral blood of a lymphoma patient. Tested mediums were supplemented with 50 ng/ml OKT3 and 300 IU/ml IL2. At day 2 post seeding, 2 – 3M cells for the G-Rex24 were transduced with a CD19-CAR lentiviral vector in 6w/p pre-coated with RTN. Post transduction the cells were collected and reseeded. At day 4, 4 ml fresh medium +IL2 were added and at day 6, 50% medium was replaced with fresh medium + IL2. At day 9 transduction efficiency was evaluated and at day 10 Fold expansion was measured.

4Cell® Nutri-T Cell Medium: Sartorius is Your Reliable Supply Partner

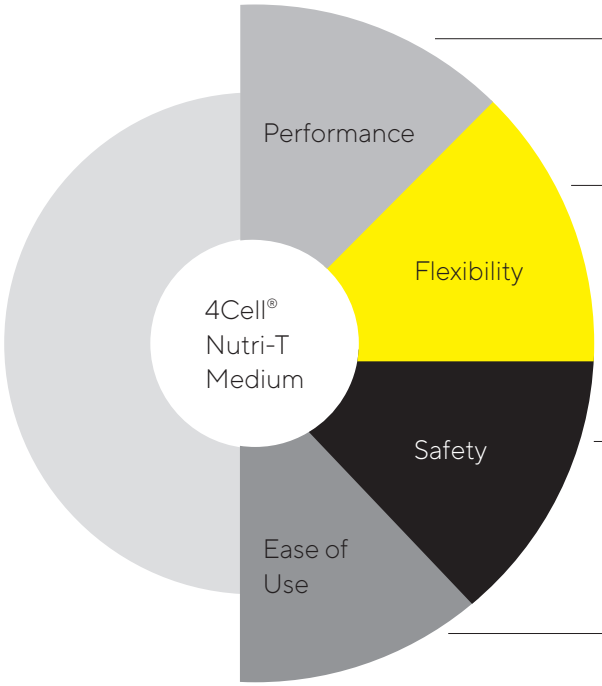
When working with a patient's cells, the materials used and the time from cell isolation to patient administration with the final product are critical. You cannot afford to waste time as a result of production or shipment delays.

Sartorius is your trusted partner. With multiple distribution sites and a robust supply chain, we can guarantee your media is on time, lot-to-lot consistent, and of the highest quality.

Ordering Information

Product Description	Size & Package	Storage	Cat. No.
4Cell® Nutri-T medium	1L Bottle (Liquid)	2 – 8 °C	05-11F2001-1K

Your Benefits at a Glance



- Superior fold expansion
- Excellent % viability and % of CD8+ expression
- High transduction efficiency % for CAR-T applications

- Superior performance for healthy PBMC, TIL, and CAR-T applications
- Superior performance with cancer patient-derived cells
- Excellent performance with low initial seeding concentrations

- No serum means elimination of serum-associated risk
- Manufactured in accordance with ISO 13408 guidelines
- Robust release testing

- No need to source, store, or purchase serum
- Low lead-time as Nutri-T is on-shelf at global Sartorius sites
- Sartorius technical support and complementary products

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