

ExCell Bio

OptiVitro[®] T Cell Serum-free Medium TE06 (phenol red-free)

For Research and Manufacturing Use
Not Intended for Diagnostic and Therapeutic Use

User Manual

Catalog Number TE000-N062
TE000-N061
TE000-N061S



Product description

OptiVibro® T Cell Serum-free Medium TE06 (phenol red-free) is a serum-free, xeno-free medium that has been specifically designed to expand human T lymphocytes *in vitro*. The medium consists of two components: OptiVibro® T Cell Basal SF Medium TE06 (phenol red-free) and OptiVibro® T Cell SF Medium Supplement, both of which are sterile and manufactured in compliance with GMP regulations. The product is free of cytokines and antibiotics.

Contents and storage

Catalog No.	Product name	Amount	Storage	Shelf life ^[1]
TE000-N062	OptiVibro® T Cell Serum-free Medium TE06 (phenol red-free)	1 kit	-	-
BA0152	OptiVibro® T Cell Basal SF Medium TE06 (phenol red-free)	1000 mL	2-8 °C Protect from light	12 months
BA0052	OptiVibro® T Cell SF Medium Supplement	8 mL	2-8 °C Protect from light	18 months
TE000-N061	OptiVibro® T Cell Serum-free Medium TE06 (phenol red-free)	1 kit	-	-
BA0151	OptiVibro® T Cell Basal SF Medium TE06 (phenol red-free)	500 mL	2-8 °C Protect from light	12 months
BA0051	OptiVibro® T Cell SF Medium Supplement	4 mL	2-8 °C Protect from light	18 months
TE000-N061S	OptiVibro® T Cell Serum-free Medium TE06 (phenol red-free) (Sample)	1 kit	-	-
BA0151S	OptiVibro® T Cell Basal SF Medium TE06 (phenol red-free) (Sample)	100 mL	2-8 °C Protect from light	12 months
BA0051S	OptiVibro® T Cell SF Medium Supplement (Sample)	0.8 mL	2-8 °C Protect from light	18 months

^[1] The Shelf-Life may be extended after strict validation by QC.

| Instructions for use

Prepare media

1. Place OptiVibro[®] T Cell Basal SF Medium TE06 (phenol red-free) and OptiVibro[®] T Cell SF Medium Supplement in a sterile laminar flow hood.
2. Add 4 mL of OptiVibro[®] T Cell SF Medium Supplement to 500 mL of OptiVibro[®] T Cell Basal SF Medium TE06 (phenol red-free), or 8 mL of OptiVibro[®] T Cell SF Medium Supplement to 1000 mL of OptiVibro[®] T Cell Basal SF Medium TE06 (phenol red-free).
3. Tighten the cap and mix the OptiVibro[®] T Cell Basal SF Medium TE06 (phenol red-free) thoroughly.
4. The complete OptiVibro[®] T Cell Basal SF Medium TE06 (phenol red-free) can be supplemented with cytokines like IL-2, IL-7, or IL-15 to support T-cell expansion.

Note: It is recommended to use complete OptiVibro[®] T Cell Serum-free Medium TE06 (phenol red-free) within four weeks after mixed.

Culture T-cells from PBMCs

1. Prepare fresh peripheral blood mononuclear cells (PBMCs) according to standard separation protocols, or rapidly thaw (<1 minute) frozen vials of PBMC cells in a 37°C water bath.
2. If using freshly prepared PBMCs, they can be directly used after washing with sterile DPBS. For frozen cells, it is recommended to thaw them one day prior to T-cell activation, and incubate them in complete OptiVibro[®] T Cell Serum-free Medium TE06 (phenol red-free) without extra cytokines at a concentration of approximately 2×10^6 cells/mL, in a humidified 37°C incubator with an atmosphere of 5% CO₂ for 16-24 hours.
3. Centrifuge the cells at 400×g for 10 minutes and remove the supernatant.
4. Before use, equilibrate complete OptiVibro[®] T Cell Serum-free Medium TE06 (phenol red-free) to room temperature. Resuspend PBMCs at a concentration of $0.5-1 \times 10^6$ cells/mL in complete OptiVibro[®] T Cell Serum-free Medium TE06 (phenol red-free) supplemented with cytokines such as IL-2, IL-7, or IL-15.
5. Transfer the cells to culture plates that are pre-coated with anti-human CD3/CD28 antibodies for activating T-cells to initiate the culture, or use commercially available beads according to the manufacturer's protocol.
6. Incubate the cells in a humidified 37°C incubator with an atmosphere of 5% CO₂.
7. Feed and adjust the cell concentration to $0.5-1 \times 10^6$ cells/mL with complete OptiVibro[®] T Cell Serum-free Medium TE06 (phenol red-free) supplemented with cytokines every 2-3 days. The cells can be transferred to bioreactors for further expansion at around Day 7 after T-cell activation.