

OptiVitro® NK Cell Expansion Serum-Free Medium Kits P01 & NE01

Defined medium system for NK cell activation and expansion

Xeno-free | Serum-free | Scalable culture workflow

Product overview

OptiVitro® NK Cell Expansion Serum-Free Medium Kits P01 and NE01 support activation, selective expansion, and culture of human natural killer (NK) cells for research, process development, and manufacturing workflows. The system pairs a serum-free basal medium with a nutrient supplement and selected cytokine components for robust NK cell growth under xeno-free culture conditions.

Key features

- Xeno-free, serum-free culture system formulated without animal-derived components.
- Supports NK cell expansion from PBMC and umbilical cord blood mononuclear cells; compatible with iPSC-derived NK cells and established NK cell lines.
- Designed for efficient NK-cell activation and expansion, with functional cells typically generated within a 14-day culture workflow under appropriate conditions.
- Flexible kit-based format for research, process development, scale-up, and manufacturing applications.
- Sterile-filtered medium components and temperature-specific storage guidance for reliable handling.

Typical applications

Expansion of human NK cells for immunotherapy research, cell and gene therapy process development, assay development, and non-clinical manufacturing workflows.

GENERAL CULTURE GUIDANCE Prepare complete medium using the supplied basal medium, supplement, and designated cytokine component(s). Culture conditions, cytokine use, seeding density, and scale-up approach should be optimized for the starting cell source and intended process. Refer to the applicable product user manual for detailed instructions.

General product characteristics

Parameter	General characteristic
Classification	Serum-free, xeno-free NK cell expansion medium system
Product type	NK cell activation and expansion medium kit
Compatible cell sources	PBMC, cord blood mononuclear cells, iPSC-derived NK cells, and suitable NK cell lines
Core components	NK cell serum-free basal medium, immune cell supplement, and cytokine components
Cell type	Human natural killer (NK) cells
Form	Liquid medium with supplemental and cytokine components
Intended use	Research and manufacturing use only; not intended for diagnostic or therapeutic use

PRODUCT INFORMATION

Ordering, storage and use

Product configurations

Product	General configuration	Availability
P01	Complete NK cell expansion serum-free medium kit; standard formats include 500 mL and 1,000 mL kits.	Contact LLT for current catalog options
NE01	NK cell expansion serum-free medium kit configuration for defined customer workflows.	Contact LLT for configuration and pack size

Catalog availability, configuration, and pack sizes should be confirmed at the time of order.

Typical kit contents

Component	Function	Storage
NK Cell Serum-Free Basal Medium	Foundational medium for NK cell culture and expansion.	2-8°C; protect from light
Immune Cell Serum-Free Medium Supplement	Adds essential nutrients to complete the basal medium.	2-8°C; protect from light
Cytokine I / II / III	Supports activation, coating/priming steps, and NK cell proliferation as directed in the user manual.	-20°C; protect from light

Storage, transport and shelf life

Store basal medium and supplement at 2-8°C, protected from light. Store cytokine components at -20°C, protected from light. Transport basal medium and supplement below 25°C and cytokines below 0°C, with protection from light. Refer to the product label for component-specific shelf life and expiration date.

General handling recommendations

- Protect medium and cytokine components from prolonged exposure to ambient and fluorescent light.
- Thaw cytokines at room temperature immediately before use; avoid prolonged exposure to air after opening.
- Prepare complete medium aseptically in a biosafety cabinet according to the applicable user manual.
- After preparation, use complete medium within the validated in-use period stated in the product documentation.
- Do not use UV irradiation to sterilize the product or its packaging.

PREPARATION PRINCIPLE Bring basal medium and supplement to room temperature, add the supplement to the basal medium, and mix gently. Add the designated cytokine component(s) according to the applicable user manual before initiating culture. Do not exceed the stated freeze-thaw limitations for cytokines.

Quality and intended use

OptiViro® products are manufactured under applicable quality systems. This datasheet provides general product information and does not replace the product label, user manual, Certificate of Analysis, or Safety Data Sheet. For research and manufacturing use only. Not intended for diagnostic or therapeutic use.