

UAB "LT Biotech"

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K-Prime

Complete Medium for Natural Killer Cells Cat. No.: NKF100ML (100 ml), NKF20ML (20 ml)

General Information

Natural killer cells or NK cells are a type of cytotoxic lymphocytes critical to the innate immune system and provide fast responses to viral-infected cells. They act at around 3 days after infection and respond to tumor formation. Therefore, the cultivation of these primary cells is indispensable for research and for immunotherapy of cancer.

Capricorn Scientific has developed a highly suitable ready to use medium for the cultivation of Natural Killer (NK) cells, NK-Prime. The use of NK-Prime enables NK cells to grow by more than 50-fold within one month whilst maintaining all investigated properties of primary cells, such as the presence of receptors, target cell killing and degranulation activity. The growth rate is donor-dependent, most cells typically grow by up to 50-fold in one month but growth rates of up to 100-fold have also been reported. A 50-fold expansion rate allows for the production of 5×10^9 NK cells from one single buffy coat preparation.

Hence, the use of NK-Prime allows the production of a sufficient number of cells to complete multiple experiments which would otherwise not be possible. Media developed by others to produce large amounts of functional NK cells often cause a down-regulation of CD16. By contrast, we have shown that expression of this essential receptor is maintained over the whole course of expansion.

In conclusion, Capricorn Scientific's NK-Prime is a highly suitable medium for expanding human primary NK cells for use in standardized expansions and functional applications.

Applications

- Culturing primary human NK cells
- Antibody-dependent cellular cytotoxicity (ADCC) assays
- Cell therapy

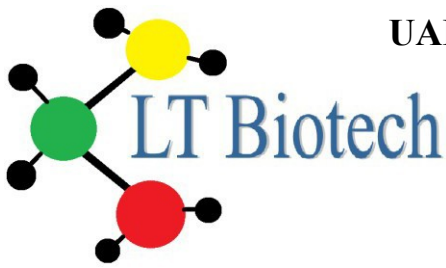
Features

- Retain primary cell characteristics
- Significantly higher cell number
- Reducing experimental lot-to-lot variations

Appearance	Clear yellowish liquid
Storage and shelf life	Store at $\leq -15^\circ\text{C}$. Once opened store at 4°C and use within 6-8 weeks.
Shipping conditions	Frozen (Dry ice)
Thawing	At $+2^\circ\text{C}$ to $+8^\circ\text{C}$. Swirl gently to homogenize.

Formulation

This formulation is our proprietary composition and has no counterparts either in its composition, or in its action.



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Instructions for Use

Thaw NK-Prime medium at refrigerator temperatures (+2°C to +8°C). Mix gently after thawing.

Supplementation of NK-Prime medium is neither necessary nor recommended. This high quality medium can be used within established procedures.

Precautions and Disclaimer

This product is for research use only.