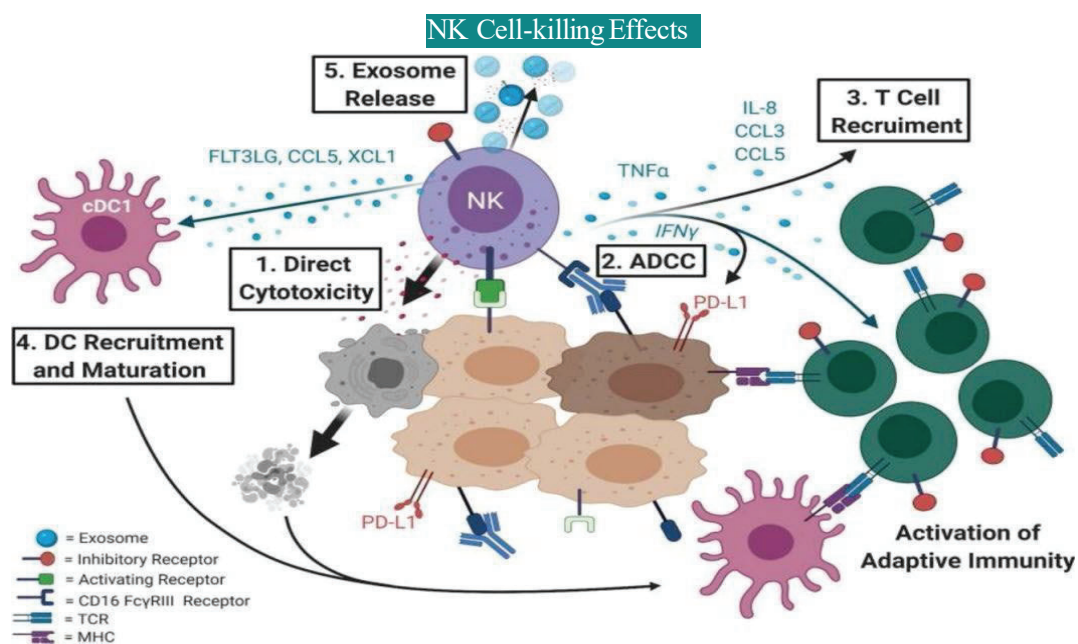


## Serum-free Culture Medium for Nobimpex NK Xeno-free

### NK Cell Introduction:

Natural killer cell (NK cells) are effective effectors of the innate immune system and the first line of defense against diseases (including malignant tumors). It can directly recognize and lyse tumor cells. It also expresses CD16FcγRIII receptor, which can recognize antibodies targeting specific tumor antigens and trigger antibody dependent cytotoxicity (ADCC). NK cells can promote IFN-γ and TNF-α mediated DC maturation to enhance antigen presentation to T cells; NK cells in tumors can produce chemokines such as CCL5 and XCL1 to directly recruit T cells and expresses FLT3LG and other activated adaptive immune responses.



Photograph: Kari A. Shaver, et al. Natural Killer Cells: The Linchpin for Successful Cancer Immunotherapy

NK cell therapy has two types of treatment options. One is the autologous or allogeneic NK cell therapy. And the other is CAR-NK therapy. Compared to autologous NK cells, allogeneic NK cells are usually more effective and have stronger toxicity to tumors. Therefore, it is particularly important to culture and maintain the functionality of NK cells after being reintegrated into the body in vitro.

NK cells can be isolated and purified from peripheral blood and can also be differentiated from C D34 stem cells prepared from umbilical cord blood, placenta, or iPSCs. The number of NK cells in peripheral blood mononuclear cell (PBMC) is small, and primary NK cells from PBMC can be preferentially expanded by various methods. Since the in vitro expansion of NK cells relies on multiple cell signals for survival, proliferation, and activation, therefore, selecting an appropriate NK cell expansion strategy is crucial for clinical cell therapy of this cell.

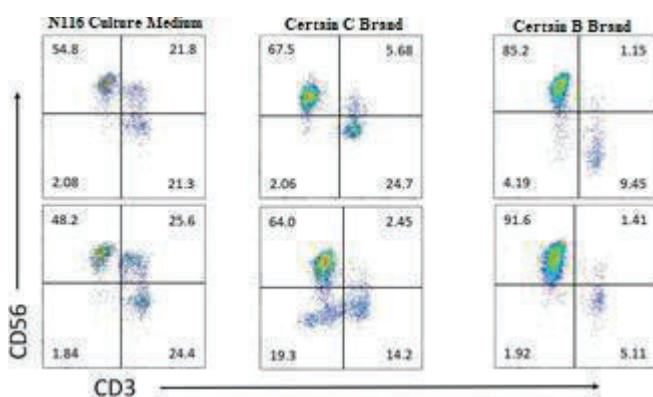
## Culture Medium Specialized for Nobimpex NK Xeno-free

### Product Introduction:

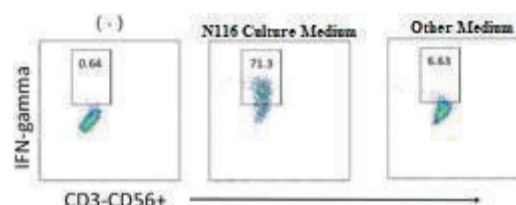
This product is a serum-free culture medium developed by our company specialized for human NK cells and artificial blood stem cells. It is Xeno-free with no animal serum components, and no exogenous stimulating factors or unclear added components, only contains nutrients such as recombinant human insulin, human transferrin, and human serum albumin which is prepared from human plasma collected by an US FDA certification and licensing agency and has been tested for HBsAg, anti-HIV 1/2, anti HCV, HIV-1 RNA, HCV RNA, and HBV DNA according to FDA guidelines. The test results were all negative.

**Application:** In Vitro culture and Expansion of NK Cells.  
Culture of Hematopoietic Stem Cells.

### Purity Experiment (For Reference):



### Functional Experiments (For Reference):

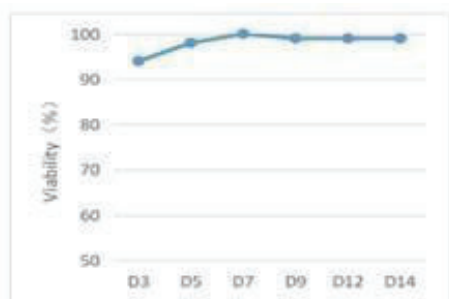


### Product Features:

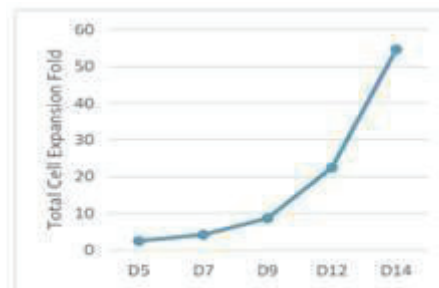
- Ready-to-use. Can be directly used for cell culture with no need to add autologous plasma or other complexity factors.
- Unique formula significantly increases the number and phenotype of cell cultures, with strong cell functionality.
- Xeno-free, with clear composition, strong repeatability of experiment and stability.
- Produced under cGMP conditions and tested for sterility, endotoxin, mycoplasma, and cell culture.

The NK expansion kit can support the high viability and purity of NK cells as well as preserve the functionality of NK cells. It performs better than plasma culture, even under plasma-free conditions.

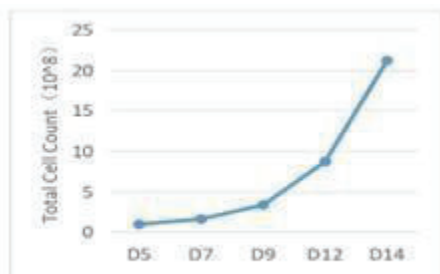
The following figure shows the culture, expansion, and CD3-CD56+ expression rate of NK cells derived from umbilical cord blood without plasma addition.



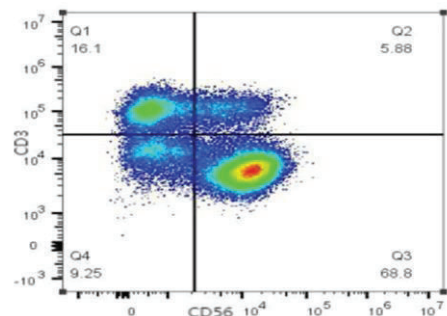
**Figure 1: Maintain high-viability culture**



**Figure 2: Enable high cell expansion fold**



**Figure 3: Achieve high cell count**



## Product Information:

Product Name	Product Introduction	Product NO.	Amount	Price (USD)
Culture Medium Specialized for NK	Serum-free Culture Medium Specialized for NK	N116-500	500ml	Inquiry
		N116-1000	1000ml	
Culture Medium KIT Specialized for NK	Culture Medium Specialized for NK	N116-1000	1000ml	
	NK Cell Growth Factor	N116-A010	1ml	
	NK Cell Growth Supplement	N116-G030	3ml	

**Storage Condition:** 2-8°C. Stored away from light.

**Shelf Life:** 18 months.

## ❖ Product and Quality (Certification& Registration) Information:

▶▶ National Medical Products Administration (NMPA) Medical Device Document Registration No.: M2023029-000

▶▶ Medical Device Record No.: Sutaixiebei20200571

▶▶ Quality Management System Certificate: ISO13485:2016