Neo MDCK, Chemically Defined Medium for Virus Production in MDCK Suspension Cells, with Stable Glutamine

#Cat: NB-58-0088 Size: 500ml

General Information

Neo MDCK is a chemically defined medium specifically developed to support the growth and virus infection of Madin- Darby Canine Kidney (MDCK) cells in suspension. MDCK cells are classically used for viral vaccine manufacturing processes (e.g., Influenza vaccine) but also in biomedical research fields. Neo MDCK is serum-free and 100% animal component-free, fulfilling the highest safety and regulatory standards required for biopharmaceutical applications. The ready-to-use formulation, containing stable glutamine, Neo MDCK simplifies production processes from bench scale to manufacturing while increasing productivity.

Product Specifications

Appearance	Clear red solution
Specifications	- Chemically defined - Serum-free - Animal derived component-free - Hydrolysate-free - Contains stable glutamine
Storage and shelf life	+2°C to +8°C; protected from light. Please refer to the label for expiry date.
Shipping conditions	Ambient

Instructions for Use

Culture Conditions

	Shake Flask Cultivation	**Bioreactor Cultivation**
Temperature	36.5°C	36.5°C
CO2	7 %	Automatic to adapt pH to 6.9 to 7.1
Shaking rate	125 rpm	110 rpm
Working volume	50 ml	3 L
Inoculation cell concentration	3×10^5 viable cells/ml	3×10^5 viable cells/ml

Stepwise adaptation from serum-containing cultures

1. Expand the culture in serum-containing standard medium.
2. Centrifuge a sufficient number of cells for inoculation of suspension culture with $3 – 5 \times 10^5$ cells/ml at 115 × g for 5 minutes.
3. Resuspend cells in Neo MDCK and 2 % Fetal Bovine Serum (FBS).
4. Passage cells or change medium by centrifugation every two to four days depending on cell density.
5. Reduce serum concentration to 0.5 % after at least three passages.
6. Passage cells or change media by centrifugation every two to four days depending on cell density.
7. Reduce serum concentration to 0 % after two to four passages.
8. Continue cultures until viabilities stabilize at > 90 %.
9. Adapted cells should be inoculated at 3×10^5 cells/ml in Neo MDCK and should be subcultured every three to four days for optimal performance.

Routine cultivation and cell expansion

1. Pre-equilibrate a sufficient amount of medium in a polycarbonate Erlenmeyer shake flask for 2 hours (36.5°C, 7% CO_2).
2. Inoculate Neo MDCK with 3 × 10^5 viable cells/ml and subculture every four days for best performance.
3. Incubate the culture according to the conditions mentioned in “Culture Conditions”.
4. Maintain cells in medium at least 3 passages prior to production phase to have full adaptation for optimal performance. Viable cell concentration shall reach at least 20 × 10^5 cells/ml before cell split.
5. If viable cell density (VCD) is too low or cells do not grow in adaption phase, centrifuge the culture and exchange the medium without dilution after 4 days.

Formulation

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

Precautions and Disclaimer

This product is for research use and further manufacturing only.

Help Needed?

If you have any further questions regarding this product, please do not hesitate to contact our cell culture experts by email (info@neo-biotech.com) or phone (+33 9 77 40 09 09).