

Product sheet

MDCK (NBL-2) | 602280

General Information

Description MDCK (Madin-Darby Canine Kidney) cells are a continuous cell line derived from a 7-month-old male dog. They are epithelial cells that grow in a polarized manner, forming a monolayer. MDCK cells are commonly used in virology and immunology research, particularly for the study of influenza virus and the production of viral vaccines. They are also used in cell biology research to study cell polarity and cell-cell interactions. MDCK cells are highly resistant to mycoplasma contamination and are easy to maintain in culture.

Organism Canis familiaris

Tissue Kidney

Synonyms MDCK-NBL-2, MDCK-1, MDCK-2, MDCK-3, MDCK-4, MDCK-5, MDCK-6, MDCK-7, MDCK-8, MDCK-9, MDCK-10

Characteristics

Breed/Subspecies Canine

Age 7 months

Gender Male

Morphology Epithelial

Cell type Epithelial

Growth properties Adherent

References

Citation MDCK (NBL-2) (ATCC CCL-34) | 602280

Biosafety level 1

NCBI_TaxID 9615

CellosaurusAccession CVCL_0422

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Cell Line Information

Virus susceptibility	MDCK (NBL-2) is susceptible to Influenza A Virus (H1N1), Influenza A Virus (H3N2), and Influenza B Virus (B5).
Virus resistance	MDCK (NBL-2) is resistant to B3 and B4.
Reverse transcriptase	MDCK (NBL-2) is negative.
Products	MDCK (NBL-2) is available as a cell line.

Media and Conditions

Culture Medium	DMEM: DMEM:Ham's F12 (1:1) 3.1 mg/ml / 2.5 mg/ml 15 mg/ml (15 mg/ml)
Supplements	10% FBS
Dissociation Reagent	MDCK (NBL-2) is sensitive to trypsin.
Subculturing	MDCK (NBL-2) is cultured in DMEM: DMEM:Ham's F12 (1:1) 3.1 mg/ml / 2.5 mg/ml 15 mg/ml (15 mg/ml) with 10% FBS.
Seeding density	1×10^4 cells/cm ²
Fluid renewal	3 times
Post-Thaw Recovery	MDCK (NBL-2) is cultured in DMEM: DMEM:Ham's F12 (1:1) 3.1 mg/ml / 2.5 mg/ml 15 mg/ml (15 mg/ml) with 10% FBS for 24 hours.
Freeze medium	MDCK (NBL-2) is cultured in DMEM: DMEM:Ham's F12 (1:1) 3.1 mg/ml / 2.5 mg/ml 15 mg/ml (15 mg/ml) with 10% FBS + 10% DMSO.

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Thawing and Culturing Cells

1. Thaw the vial rapidly in a water bath at 37°C. Transfer the cells to a pre-warmed medium.
2. Centrifuge the cells at 300 x g for 3 minutes. Resuspend the cells in pre-warmed medium.
3. Seed the cells into a flask containing 37 mL of pre-warmed medium.
4. Incubate the cells at 37°C in a humidified atmosphere with 70% relative humidity.
5. After 15 minutes, check the cell attachment. If necessary, add 8 mL of medium.
6. After 30 minutes, check the cell attachment. If necessary, add 3 mL of medium.
7. After 10 hours, check the cell attachment. If necessary, add 10 mL of medium.
8. After 24 hours, check the cell attachment. If necessary, add 10 mL of medium.

Incubation Atmosphere

37°C, 70% relative humidity

Flask Coating

Flask coating is not required for this cell line.

Freezing Procedure

Freezing medium: 10% FBS, 10% DMSO, 80% FBS. Incubate at 37°C for 78 hours.

Shipping Conditions

Shipping medium: 10% FBS, 10% DMSO, 80% FBS. Shipping at 4°C for 78 hours.

Storage Conditions

Storage medium: 10% FBS, 10% DMSO, 80% FBS. Storage at -150 to -196°C.

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Sterility

The cells are free of mycoplasmas and other contaminants. The cells are tested for sterility (PCR) and are found to be sterile.