

MCDB 131 Medium

Cat. No.: M1523206 | Pack size: 500 mL | Storage: 2–8 °C; protect from light; do not freeze

Product Description

MCDB is a type of medium designed for low-protein and serum-free culture of specific cells. MCDB 131 is one of the MCDB series media, developed by Knedler and Ham. It was originally used for the culture of human microvascular endothelial cells (HMVEC). In addition to endothelial cells, MCDB 131 medium is also applicable to other cell types, such as hepatocytes, smooth muscle cells, cardiomyocytes and more.

Product Features:

Different from traditional culture media, MCDB 131 medium contains trace elements, putrescine, adenine, thymine, as well as higher concentrations of amino acids and vitamins. It is commonly used in combination with EGF, hydrocortisone, L-glutamine and low-concentration serum. The serum supplementation concentration should be determined according to the specific cell type.

Product Components:

Form	Liquid
Concentration	1×
Specification	500 mL
pH	7.2–7.4
L-Glutamine	None
NaHCO ₃	1176 mg/L
D-Glucose	1000 mg/L
Sodium Pyruvate	1 mM
HEPES Buffer	None
Phenol Red Indicator	12.4 mg/L

Product Information

Item	Details
Synonyms	MCDB 131 Cell Culture Medium Medium MCDB 131 MCDB 131 Medium
Specifications & Purity	BioReagent, for cell culture, sterile, 1×; with sodium pyruvate and phenol red; without L-glutamine and HEPES

Item	Details
Pack Size	500 mL
Application	Cell Culture
Stability and Storage	Store at 2–8 °C long term (12 months). Do not freeze. Store in the dark.
Storage	Store at 2–8 °C, protected from light. Do not freeze.
Shipped In	Wet ice. Do not freeze. This product requires cold-chain shipping; ground and other economy services are not available.
Sensitivity	Light-sensitive

Operating Guidelines

1. Thaw trypsin (0.25% trypsin with 0.02% EDTA) and complete medium to room temperature in advance.
2. Discard the old culture medium and rinse the cell monolayer with DPBS.
3. Add an appropriate volume of trypsin (e.g., 5 mL for a 75 cm² culture flask) to fully cover the cell monolayer. Incubate at 37 °C for 1–3 minutes. Observe under an inverted microscope until cells are completely detached from the flask surface; gently tapping the flask helps cell detachment.
4. Add 5–10 mL of complete medium, rinse the inner wall of the flask and mix well. Collect the cell suspension into a 15 mL centrifuge tube.
5. Centrifuge at 1000 rpm for 5–10 minutes, discard the supernatant, and resuspend the cell pellet with 2–5 mL of complete medium.
6. Determine viable cell density and survival rate. Perform cell seeding, incubation and subculture following standard protocols according to cell type and experimental requirements.

Precautions

1. Transport at room temperature. Upon receipt, store at 2–8 °C in the dark and avoid repeated freeze-thaw cycles. The shelf life is 1 year.
2. This product is sterile filtered; gently invert and mix well before use.
3. Our company shall not be liable for any accidents caused by improper use of this product.

Quality Control

QC Item	Method	Acceptance / Reference
Identity and label	Inspect bottle and label on receipt	Product name, formulation, lot number, pack size, and expiry information are legible and match the order.

QC Item	Method	Acceptance / Reference
Appearance and pH	Visual inspection and pH check according to laboratory SOP	Liquid medium; pH 7.2–7.4; investigate visible contamination or out-of-range pH.
Aseptic status	Review lot-specific COA and culture controls	Use only material released for the stated sterile grade and showing no evidence of contamination.

Troubleshooting

Issue	Possible Causes	Corrective Action
Poor cell growth	Missing required supplements; unsuitable serum level; medium warmed or stored improperly	Add supplements appropriate for the cell type (e.g., EGF, hydrocortisone, L-glutamine and low-concentration serum) and protect the medium from light.
Abnormal medium color or pH	Extended exposure to air/light; contamination; incorrect incubation conditions	Check pH, CO ₂ conditions and sterility; discard visibly contaminated or out-of-specification medium.
Poor cell detachment during passage	Insufficient trypsin coverage or incubation	Ensure the monolayer is fully covered and monitor detachment for 1–3 minutes at 37 °C.

Recommended Applications

Low-protein or serum-free culture of selected cells, including human microvascular endothelial cells, hepatocytes, smooth muscle cells, cardiomyocytes, and other validated cell types.

Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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Limitations & Disclaimer

- ☐ For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
- ☐ This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- ☐ Where any kit component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
- ☐ Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the kit for their specific application.
- ☐ Aladdin product labels, SDS, COA, and approved specifications take precedence over this document. If product formulation, label, SDS, storage conditions, pack size, or quality specifications change, this document would be reviewed and reissued.