

Product Name:	QuaCell® CellBest Basal Medium
Cat. No.	A12009
Amount:	10L, 100L, or customized
Formulation:	Powder
Storage:	2~8°C
Validity period:	24 months(Validity period on product packaging)

Description

QuaCell® CellBest Basal Medium provides a rich environment for high density CHO cell growth. QuaCell® CellBest Basal Medium is a serum-free, animal component-free, chemically defined medium developed for CHO suspension culture for expression of antibodies and protein products. Applicable to all CHO cell subtypes, such as CHO-GS, CHO-K1, CHO-DG44, and CHO-S. QuaCell® CellBest Basal Medium is formulated without hypoxanthine, thymidine and L-glutamine, suitable for DHFR, glutamine synthetase (GS System) screening system.

Components

L-glutamine	No
Glucose	6.00 g/L
Hypoxanthine & Thymidine	No
Phenol red	No
Sodium bicarbonate	No
Hydrolysate	No

Product Intended Use

Use aseptic technique when handling or supplementing this medium. This product is for research or for further manufacturing use.

CAUTION: Not for human or animal therapeutic use. Uses other than the intended use may be a violation of local law.

Safety information

Read the Material Safety Data Sheets (MSDS) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

Preparation Instructions

- Preparation method
- Add 90% of the final volume of water for injection to a suitable clean container and adjust the water temperature to 25 ~ 35°C.
 - Slowly add 22.32 g/L QuaCell® CellBest Basal medium powder, stir and mix for 30 minutes.
 - Slowly add 6.5mL 5mol/L NaOH and stir 10 minutes until dissolved.
 - Slowly add 1.80 g/L NaHCO₃ and stir 10 minutes until dissolved.
 - Use 5 mol/L HCl or NaOH to adjust the pH to 6.90 ~ 7.35, stir and mix for 20 minutes

6. Add water for injection to the desired final volume, stir and mix well.

7. Sterilize by filtration using pore size 0.22µm filter.

- Use QuaCell® CellBest Basal medium under sterile condition.
- This product does not contain L-glutamine. In culture of GS gene expressing host cells, it is recommended to add 4mM L-glutamine before use. According to the editing of GS gene of cell line, L-glutamine concentration can be adjusted as required.
- Antibiotics are not recommended.
- The unused media after opening should be sub package, Use sealing film to seal, In 2 ~ 8°C avoid light preservation.

Condition of cell culture

Medium: complete QuaCell® CellBest Basal Medium

Cell Line: CHO cells

Culture type: suspension

Culture container: shaker /TPP/ reactor

Temperature range: 37°C±0.5°C

Incubator air requirements: humidified with 5%~8% CO₂

Note: ensure proper air exchange and minimum exposure.

Cell recovery

- Quickly thawing cryopreservation tube in 37 °C water (< 2 minutes) .
- Transfer Cell liquid to 15 mL centrifuge tube. Add 10 mL of preheating QuaCell® CellBest Basal medium, centrifugate at 1,000 rpm for 5 min, discard the supernatant, using 5 mL QuaCell® CellBest Basal medium suspension, cell counting.
- Use an automated cell counter or other counting instrument to count cells, pipette the cell fluid to a 125 mL shaker flask as needed for cell density, and add an appropriate amount of QuaCell® CellBest Basal medium to achieve the desired resuscitation density; the recommended resuscitation density is (3~5) × 10⁵ cells/mL.
- Culture in incubator contains 5 %~ 8% CO₂, 37°C humidified air.
- Cells should be cultured for 2 to 5 days after cell recovery and passed on in the middle stage of logarithmic growth. The recovered cells should be passed on at least three times before other experiments.

Cell passage advice

- Use automatic cell counting apparatus or other counting instruments to count the cells, and passage them according to the required density or in proportion. Recommended inoculation

density is $(3\sim 5) \times 10^5$ cells/mL.

2. Add cells to a shaker flask containing QuaCell® CellBest Basal to achieve the desired seeding density of the cells.
3. Continue culture at 37°C, 5% ~ 8% CO₂ in the shake incubator, usually passage cells after 2 ~ 3 days.

Adaptation

CHO suspension cultures can be directly cultured into QuaCell® CellBest Basal medium from serum-supplemented or serum-free medium with little or no adaptation.

It is essential that the cell is in the middle of logarithmic growth and make sure the cell viability is beyond 90% before the initiation of the adaption process.

Directly culture

Transfer the suspension culture cells to QuaCell® CellBest Basal medium, as follows:

1. Centrifuge cell suspension at 1000rpm for 3 to 5 minutes. remove and discard the supernatant.
2. Suspension cells into preheat fully QuaCell® CellBest Basal medium in $(3 \sim 5) \times 10^5$ cells/mL of living cells density and transfer to an appropriate culture flask.
3. Put culture flask back to the shake incubator and observe cell growth.

Note: if unsatisfactory cell growth is observed using procedure adaption as follows.

Procedure adaption

Steps of cell suspension culture:

1. Make cell density of $(4 \sim 5) \times 10^5$ cells/mL during the adaptation process.
2. Gradual adjustment QuaCell® CellBest Basal medium with the original proportion of cell culture medium (25:75, 50:50, 75:25, 90:10, then 100% QuaCell® CellBest Basal medium). Cells can be passaged several times depending on the situation in each step.
3. After been passaged in 100% QuaCell® CellBest Basal medium a few times, the living cell density should beyond $(1 \sim 2) \times 10^6$ cells/mL, The cell viability within 4 ~ 6 days was greater than or equal to 85%. In this phase, cells are considered suitable for QuaCell® CellBest Basal medium. In the final stage of adaptation, the cell density can be reduced to $(2\sim 3) \times 10^5$ cells/mL.

Cryopreservation

1. Prepare the required number of cells and the cells are in good condition.
2. Use an automatic cell counter or other counting instrument for cell counting, and calculate the volume required for cryopreservation medium according to the final cryopreservation density, and the recommended cryopreservation density is $>1 \times 10^7$ cells/mL.
3. Centrifugate at 1,000 rpm for 5 min, discard the supernatant, and resuspend the cells with an appropriate amount of cryopreservation medium to cryopreservation density.
4. The cell suspension should be immediately repackaged into a cryopreservation tube according to the specifications
5. According to the standard procedure, cryopreservation in

automatic or manual control freezing equipment. Transfer cells into the liquid nitrogen, stored under -130°C.

Note: after 24 hours of storage in liquid nitrogen, remove one to examine the viability and other indicators. See "cell recovery".










Fed-batch culture advice

- It is recommended to add feed according to the QuaCell® CellBest 007 Feed product profile.
- Day4 begins to measure the sugar concentration of the cells; If the cell growth rate is fast, Day3 starts to measure the sugar concentration of the cell, and the sugar value is lower than 3g/L to 6g/L; If there is a feeding operation on the same day, it is recommended to perform sugar testing 1 h after feeding.
- Day14 or when the cell viability is less than 70% is harvested, the expression volume and other data are analyzed.
- If the project already has a mature culture process, it is recommended to use the original process for trial. If the process is in development stage, it is recommended to use the DOE method to determine the appropriate culture parameters and obtain better results.

Related Products

Cat.No.	Product
A11009	QuaCell® CellBest Basal Medium
A11907	QuaCell® CellBest 007 Feed Medium
A12907	QuaCell® CellBest 007 Feed Medium

Explanation of Symbols and Warnings

		
Sterilized using aseptic processing techniques	Use By:	Store Temperature
		
Batch code	Dry preservation	Keep away from light
		
Research use only	GMP Manufacturing	Sticky notes