

Hyber-F100S Hybridoma Cell Feed Medium

Product Name: Hyber-F100S

User Manual

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| Related Product | 错误! 未定义书签。 |

Description

Hyber-F100S is a protein-free and animal-free feed medium specifically designed for fed-batch process of hybridoma cells. The medium enables the excellent growth performance of hybridoma cells and the high-level expression of antibodies, in conjunction with Hyber-B100 or Hyber-B100S medium (Refer to the “Related Product” section).

Application

Hyber-F100S feed medium is suitable for fed-batch culture with hybridoma cells.

This product is intended for research or further manufacturing in the bio-manufacturing industry, but not for human or therapeutic use.

Composition

The IP rights of Hyber-F100S feed medium formulation are owned by Shanghai BioEngine Sci-Tech Co., Ltd.

This medium contains:

- Carbohydrates, amino acids, vitamins, bulk salts, and trace elements.
- 28 g/L D-glucose, 2 g/L P188, 40 mM glutamine.

Not contain:

- Cytokines, antibiotics, HEPES and phenol red.
- Raw materials from animal sources.

Storage

- Store medium at 2-8°C, away from light.
- Once opened, the powder medium should be stored protected from moisture in a tightly sealed container.
- Do not use it after the expiration date or being damped.

Reconstitution of Powder Medium

Table 1 shows the preparation of Hyber-F100S medium [1].

| Ingredients | Concentration |
|---------------------------|----------------|
| Hyber-F100S medium powder | 123.18 g/L [2] |
| Sodium hydroxide | 1.90 g/L |
| L-tyrosine | 1.00 g/L |
| Hyber-B100S Additive | 1 mL/L |

Table 1. Preparation of Hyber-F100S medium

- 1) Weigh 20% water of the final volume into the preparation container using pure water, ultrapure water, or water for injection at 20-30°C. Mix thoroughly (Power per Volume (P/V)>10 W/m³) without creating air bubbles.
- 2) Accurately weigh 1.90 g/L of sodium hydroxide and add it into the preparation container of 1) step. Stir for 5-10 minutes.
- 3) Weigh 1.00 g/L of L-tyrosine and add it into the preparation container of 1) step. Stir well for 5-10 minutes.
- 4) Weigh the rest 80% water of the final volume into the preparation container of 1) step using pure water, ultrapure water, or water for injection. Accurately weigh 123.18 g/L of Hyber-F100S

medium powder into the preparation container. Stir well for 20-30 minutes.

- 5) Adjust to pH 5.4-5.5 with 5 mL/L (recommended) concentrated hydrochloric acid solution. Stir for 20-25 minutes. At this point, the solution should be clear.
- 6) Add the Hyber-B100S Additive near the liquid level in the container.
- 7) Slowly adjust to pH 6.0-6.3 with 5-10 mol/L sodium hydroxide solution. Stir for 10-15 minutes.
- 8) Pass the medium solution through a pore size of 0.22 or 0.2 μm sterile filter membrane, such as PES, using a pulse pump or compressed air (3-15 psi).
- 9) Use the prepared medium liquid immediately or store it in glass bottles, PET storage bottles, or disposable storage bags with an oxygen barrier membrane in a dark environment of 2~8°C. It's recommended for use within one month.

Note:

^[1] The above parameters (such as stirring time) are set for small-scale liquid preparation. Adjust these parameters for large-scale preparation based on container capacity to ensure full dissolution of dry powder.

^[2] The "g/L" unit denotes volumetric concentration (solute mass/solution volume).

Specifications of final liquid medium

| Test | Unit | Specification |
|------------|---------|--------------------------|
| pH | | 6.0 – 6.3 ^[3] |
| Osmolality | mOsm/kg | 600 – 1000 |
| Turbidity | NTU | < 4.00 |

Table 2. Specifications of final liquid medium

Fed-batch culture

- 1) The hybridoma cells should be adapted in Hyber-B100 or Hyber-B100S at least two passages.
- 2) Ensure that the cell viability is >90%, and the growth rate is in mid-logarithmic phase prior to inoculation.
- 3) Calculate the volume of cell culture and medium necessary to seed at $1.0\text{-}1.5 \times 10^6$ viable cells/mL in a shake flask.
- 4) Incubate at 37°C in a humidified atmosphere of 5% CO₂ in air on an orbital shaker platform rotating at 110-130 rpm (110 rpm for 50 mm amplitude; 130 rpm for 10 mm amplitude).
- 5) The day of inoculation was recorded as day 0 (D0). Follow the suggested feed strategy as outlined in Table 3.
- 6) Harvest the cells on day 7 or when viability falls below 50%.

| Feed Medium | D1 | D2 | D3 | D4 | D5 | D6 | D7 |
|-------------------------------------|----|----|----|----|----|----|----|
| Hyber-F100S Feed medium (%, v/v) | 3 | 3 | 3 | 3 | 3 | 3 | / |

Table 3. Recommended feed strategy

Related Product

| Product | Cat. No. | Form | Size | Packaging | Notes |
|---|------------|--------|-------|-----------|---|
| Hyber-B100 Hybridoma Cell Serum-free Medium | EXP0118901 | Liquid | 1 L | Bottle | ● SF, PF, ADCF |
| Hyber-B100S Hybridoma Cell Serum-free Medium | EXP0111201 | Powder | 100 L | Bag | ● Suitable for high-density hybridoma cell suspension cultures and supports high protein expression |
| | EXP0111202 | Powder | 10 L | Bag | |
| | EXP0111203 | Powder | 5 L | Bag | |
| Hyber-F100S Hybridoma Cell Serum-free Feed Medium | EXP0111301 | Powder | 20 L | Bag | |
| | EXP0111302 | Powder | 2 L | Bag | |



Scan the QR code for more product information.

Stay tuned for more updates.

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