

# BD Cell™ MAb Medium, Animal Component Free

## BD Cell™ MAb Medium, Quantum Yield

### BD Cell™ MAb Medium, Serum Free

#### Product Description

BD Cell MAb media are formulated to produce high-yield monoclonal antibody secretion. BD Cell media show an increase in yield of 5-25 times more antibody than with conventional media. The amount of increased expression will be cell line dependent. BD Cell media not only increase yield, but also dramatically reduce media consumption and labor cost. Cells will retain viability for longer periods of time and require much less handling than is needed with traditional media.

BD Cell MAb media will support the growth of a wide variety of myeloma fusion partners and hybridomas including: Sp2/0, NS-1, P3X63Ag9, and FOX-NY as well as other secreting cell lines such as CHO. BD Cell media are HEPES based and can be used in either CO<sub>2</sub> incubators or non-CO<sub>2</sub> incubators in a closed system. Always pre-warm medium to 37°C before use.

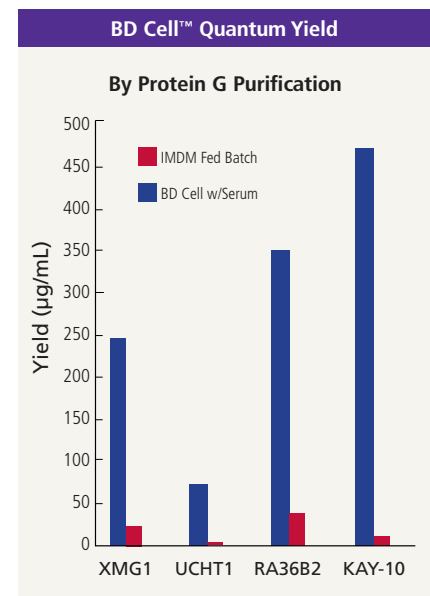
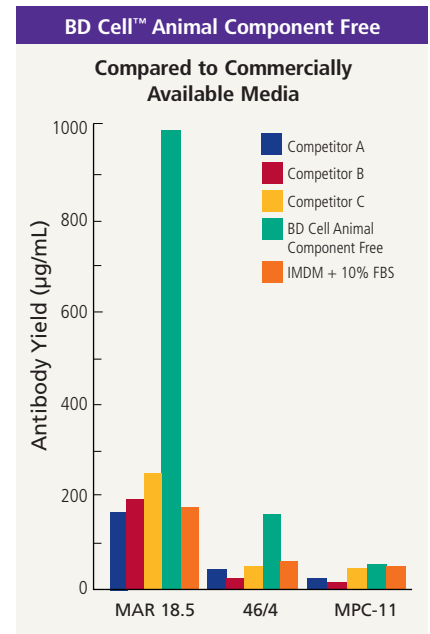
If you supplement your current medium with special growth factors, cholesterol, or lipids, etc., your cells may still need these supplements. A trial period with and without the supplements is recommended.

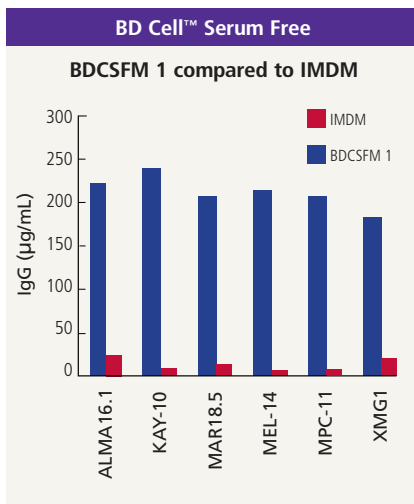
**BD Cell™ MAb Medium, Animal Component Free**, is a complete medium designed to enhance monoclonal antibody production *in vitro*. BD Cell™ Animal Component Free contains L-glutamine and is supplemented with 0.3% Select Soytone, an enzymatic digest of soybean. It does not contain phenol red or pluronic acid or other surfactants. It does not contain attachment factors, which will need to be added if this medium is used with attached dependent cell lines.

- BD Cell™ Animal Component Free is a 1× sterile medium with a shelf life of six months if stored at 4°C in the dark.
- pH at 25°C: 7.0 to 7.4
- Osmolality: 315 to 365 mOsm
- Endotoxin High limit: 10.0 EU/mL

**BD Cell™ MAb Medium, Quantum Yield**, is a chemically defined basal cell culture medium designed to enhance monoclonal antibody production *in vitro*. BD Cell™ Quantum Yield contains L-glutamine and phenol red. It does not contain pluronic acid or other surfactants. BD Cell™ Quantum Yield is a basal medium and must be supplemented in the same way that you supplement your traditional basal medium (i.e., serum or serum-free supplements, antibiotics, etc.).

- BD Cell™ Quantum Yield is a 1× sterile medium with a shelf life of one year if stored at 4°C in the dark.
- pH at 25°C: 7.0 to 7.4
- Osmolality: 315 to 365 mOsm
- Endotoxin High limit: 1.0 EU/mL





**BD Cell™ MAb Medium, Serum Free**, is a complete medium designed to enhance monoclonal antibody production *in vitro*. BD Cell™ Serum Free contains L-glutamine and phenol red and has a total protein content of 1.1 mg/mL. The majority of the protein is comprised of bovine serum albumin. It does not contain pluronic acid or other surfactants.

- BD Cell™ Serum Free is a 1× sterile medium with a shelf life of six months if stored at 4°C in the dark.
- pH at 25°C: 7.0 to 7.4
- Osmolality: 315 to 365 mOsm
- Endotoxin High limit: 1.0 EU/mL

NOTE: Do not freeze BD Cell media. Please note that BD Cell Quantum Yield and Serum Free media should be more orange-yellow in color than other basal and serum free media such as DMEM, IMDM or RPMI 1640.

## Application

### Production

Some cell lines may adapt readily to BD Cell™ Animal Component Free medium or Serum Free medium while other cell lines may require adaptation first to BD Cell Quantum Yield medium followed by adaptation to the animal free or serum free medium (see Adaptation of Cells into BD Cell MAb Medium). Protocols for various culture systems such as roller bottle, hollow fiber and stirred tank are available upon request or can be accessed at [www.bd.com/industrial](http://www.bd.com/industrial).

NOTE: Adaptation cultures will not be a true indicator of antibody production potential.

### Fusions

BD Cell media have been found to work well in cell fusions thus eliminating the adaptation process for new clones. Normal fusion procedures can be followed with the substitution of BD Cell media for the traditional media.

### Downstream Processing

High speed centrifugation or filtration procedures such as tangential flow filtration can be used for cellular material removal prior to purification.

Purification of products produced using BD Cell™ Animal Component Free medium may be greatly simplified due to the low molecular weight of the Select Soytone supplementation. Ammonium sulfate precipitation or diafiltration can be utilized to extract the protein of interest rather than usage of Protein A or Protein G affinity purification.

Normal purification procedures such as Protein A or Protein G work well for processing supernatants produced using BD Cell™ Quantum Yield.

Normal purification procedures such as Protein A or Protein G also work well for processing supernatants produced using BD Cell™ Serum Free medium. The purity of the product should be higher with BD Cell™ Serum Free medium as compared to product produced with serum supplemented media. The use of bovine serum albumin in BD Cell™ Serum Free medium eliminates the co-purification of bovine IgGs that occurs with serum supplemented media.

## Availability

Product Description	Cat. No.	Qty.
BD Cell™ MAb Medium, Animal Component Free . . . . .	220513 . . . . .	1000 mL
BD Cell™ MAb Medium, Quantum Yield . . . . .	220511 . . . . .	1000 mL
BD Cell™ MAb Medium, Serum Free . . . . .	220509 . . . . .	1000 mL

Custom packaging is available upon request.

## Adaptation of Cells into BD Cell™ MAb Medium

Some cell lines may adapt readily to BD Cell™ MAb media, but most will require a brief period of adaptation. Cell lines may necessitate adaptation first to BD Cell™ Quantum Yield basal medium followed by adaptation to BD Cell™ Animal Component Free medium or Serum Free medium. It is recommended that adaptation to BD Cell™ media be performed before changing to a new growth system.

Cells perform best in BD Cell™ medium when grown in an aerated system such as a roller bottle, spinner, CELLLine™ flask, etc., but adaptation can be done in a stationary system if desired. A T-flask or small roller bottle is easy to handle and uses minimal medium. Use of CO<sub>2</sub> is optional if using a closed (non-vented) system. When seeding the cells, it is best to take an aliquot from an existing culture and seed into the new media combination. This enables cell-produced growth factors to assist the cells in adaptation to the new medium. Likewise, small splits at 1:2 or 1:3 are better than 1:5 or 1:10 as this will also retain the cell-generated growth factors and help keep cells in log phase growth. Centrifuging off the current medium is not recommended.

### Procedure

From cells that are in growth phase with at least 80% viability, seed the adaptation culture vessel at  $2 \times 10^5$ /mL in 50% BD Cell™ medium and 50% current culture medium. Pass the cells for at least two days in this media combination. If cells retain normal doubling time and good viability they are ready for the next medium combination. It is best to split the cells down no lower than  $2-3 \times 10^5$ /mL and work with cells daily. For weekend splits, the cells may be reduced to  $1 \times 10^5$ /mL.

Next, seed cells at  $2 \times 10^5$ /mL in 75% BD Cell™ medium and 25% current culture medium. Pass the cells again for at least two days keeping the densities as suggested above. The cells may begin to slow down in their doubling time. If this happens, give the cells more time to adapt at this medium combination.

When cells are growing well in the 75/25% combination, they are ready to be seeded into 100% BD Cell™ medium. Again, keep the cell density high to help with the adaptation. Allow at least 2 to 3 cell passages at 100% BD Cell™ medium before moving cells to the production system. It is best not to change to 100% BD Cell™ medium over a weekend but early in the week so cells can be passed every day at higher cell densities.

While the cells are being adapted, production can be monitored but until the cells are placed in an aerated production system, the results will not be indicative of the true production performance of BD Cell™ medium.