



IS BAC

Serum-Free and Protein-Free Medium for insect cells

- Catalog Number 9194

IS BAC™ is a serum-free and protein-free medium which supports the growth of *Spodoptera frugiperda* (Sf9, Sf21) and *Trichoplusia ni* (BTI TN-5B1-4 or High-Five™) cells. This protein-free medium supports high production of insect virus and recombinant proteins, and has the capacity for long-term cell growth. Cells grown in other serum-free media can be subcultured directly into IS BAC with minimal adaptation. IS BAC addresses customer concerns relating to consistency, regulatory, and downstream process issues because it has been developed with components that are defined and of non-animal origin.

Features

- Available as a complete liquid.
- Little or no adaptation required.
- Lot-to-lot consistency.
- IS BAC has a shelf life of one (1) year when stored at 2-8° C and protected from light.
- Available in 1 L packaging.
- Custom configurations are available.

Adaptation

Insect cells currently adapted to serum-free medium can be subcultured directly into IS BAC with essentially no adaptation. However, we recommend that the cells be grown for a minimum of two passages in IS BAC prior to performance testing. Cells should be subcultured two times per week when the density reaches 2 to 4 x 10⁶ cells/mL with at least 90% viability, to a subculture density of 3 x 10⁵ cells/mL. See product insert for instructions. IS BAC adaptation protocol is available.

Figure 1A. Sf 9 Cell Growth

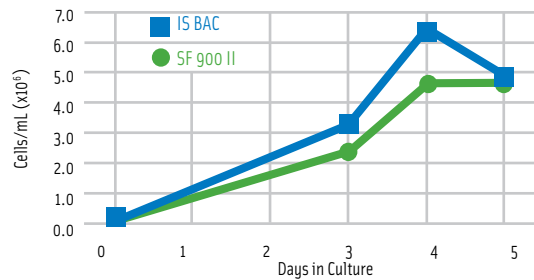


Figure 1B. High-Five™ Cell Growth

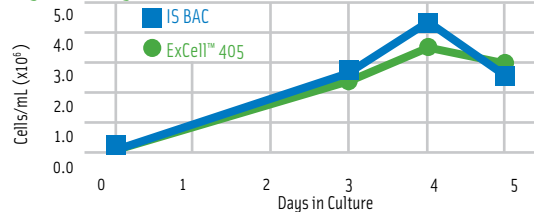


Figure 2. β-Gal Expression in Various Media

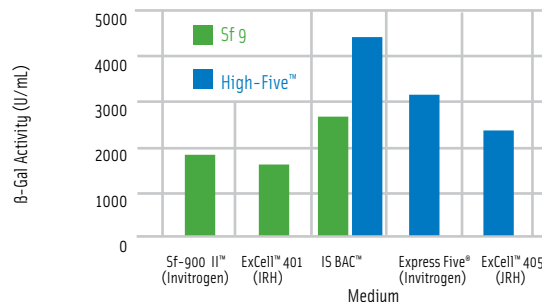
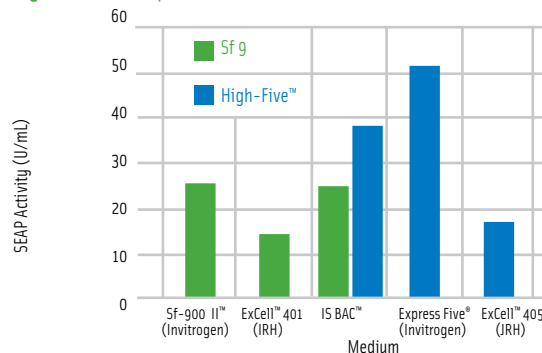


Figure 3. SEAP Expression



Performance

Our results indicate that Sf 9 (Figure 1A) and High-Five (Figure 1B) cells grown in IS BAC (in shaker cultures) consistently grow to high cell densities (5 to 6 x 10⁶ cells/mL for Sf 9 and 4 x 10⁶ cells/mL for High-Five) with greater than 90% viability. The production of recombinant proteins can be improved in IS BAC compared to other media formulas as shown in Figures 2 and 3.

Using either Sf 9 or High-Five cells, IS BAC yielded higher levels of β-gal production than other commonly used formulas (Figure 2). The production of SEAP in IS BAC is consistently better in some cases (Figure 3). The data lead to the conclusions that optimum production is a function of both cell line and recombinant vector/product, and that for many applications IS BAC is likely to yield the best results.

For more information on all of our Cell Culture Products, call 1 (800) 437-5706 and ask for your Territory Manager or visit our website at www.irvinesci.com.

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