GPEX® BOOST TECHNOLOGY
The next generation of cell line development

Achieve higher titers by leveraging the power of proven GPEX® Technology with a glutamine synthetase knockout CHO cell line.

Whether you are developing a monoclonal antibody or a difficult-to-express protein, GPEX® Boost technology enables robust cell line development with up to 10 g/L for standard monoclonal antibodies.

GPEX® technology targets the insertion of a gene into multiple transcriptionally active sites, leading to highly stable, high titer production cell lines (FIGURES 1-2).

**FIGURE 1** GPEX® cell line development process

**FIGURE 2** Retrovector internalization through DNA integration into genome
Benefits of GPEX® Technology

- No antibiotic selection
- No gene amplification using toxic compounds
- No need to test genetic stability
- 120+ clinical trials utilizing GPEX® cell lines
- 12 commercially approved products using GPEX® technology

GPEX® Boost takes cell line development to the next level by optimizing traditional GPEX® technology to a glutamine synthetase (GS) knockout CHO cell line.

GPEX® BOOST TECHNOLOGY BENEFITS

- Up to 10 g/L titers in standard monoclonal antibodies
- Up to 4x higher titers in difficult-to-express proteins
- Reduced ammonia build up leading to improved cell growth and viability
- Commercially-approved and industry-accepted GPEX® and GS knockout technologies
- Same industry-leading stability benefits as enjoyed with original GPEX® technology
- Can be also used with SMARTag® bioconjugation technology

The combination of GPEX® technology and GS knockout cell line has a synergistic effect, resulting in a robust and very consistent cell line development platform that improves the efficiency of drug substance manufacturing.

Why Catalent Biologics?

For more than two decades, Catalent Biologics has built capabilities and experience in development, manufacturing, and analytical services for new biological entities, gene therapies, biosimilars, and antibody-drug conjugates. Catalent has worked with 600+ mAbs and 80+ proteins, and more than 120 clinical trials and 12 marketed products have used GPEX® cell line engineering technology. A further 25 commercially-approved products have employed Catalent Biologics’ capabilities through to aseptic fill/finish. Catalent’s latest addition, Paragon Gene Therapy’s AAV development through commercial-scale manufacturing facilities in Baltimore, Maryland, has produced over 100 clinical GMP batches across 40 programs.

Using advanced protein improvement technology and tailored solutions from DNA through to clinical and commercial supply, Catalent Biologics brings better biologic treatments to patients, faster.