

SGI-DNA Launches Multi-Tile Assembly Cloning (MTAC) Application for its BioXp™ 3200 Gene Builder

MTAC application leverages Gibson Assembly® Technology to advance automated protein and antibody engineering capabilities and custom vector printing

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SGI-DNA announces the launch of the Multi-Tile Assembly Cloning (MTAC) application for its BioXp™ 3200 Gene Builder, providing scientists with the ability to synthesize two genes and clone them with an optional constant fragment into their vector of choice, in a fully-automated overnight run. By enabling multipart assembly reactions on the BioXp Gene Builder, the MTAC application is expected to accelerate efforts in drug discovery, custom vector printing, metabolic engineering, and protein engineering.

Todd R. Nelson Ph.D., CEO of SGI-DNA, stated, "We are excited to expand the capabilities of the BioXp instrument with the launch of MTAC. We continue to execute on our product roadmap with emphasis on consolidating tedious, manual steps currently carried out at the lab bench. By automating and shortening molecular biology workflows, we aim to empower researchers to focus on their downstream efforts such as drug discovery."

The benchtop BioXp Gene Builder, the world's first DNA printer, is a synthetic genomics workstation that generates high-quality synthetic DNA, genes and clones. With the introduction of the MTAC application, the BioXp system now has the additional capability to assemble and simultaneously deliver 16 MTAC reactions in up to four unique vectors from DNA sequences submitted electronically. MTAC allows synthesis lengths up to 3.6kb and provides workflow flexibility, increased productivity, and eliminates the need to subclone.

Prior to its commercial launch, the MTAC application was made available to select customers through SGI-DNA's early access program. Customers are reporting that the MTAC application drastically improved their antibody screening workflows. One early access customer, Rena Mizrahi, Vice President of Process Development at GigaGen, commented, "Using MTAC on the BioXp gives GigaGen flexibility and control over all aspects of our antibody development pipeline. It has allowed us to rapidly clone and test hundreds of antibodies discovered using Surge technology. With MTAC we can synthesize heavy and light chain variable regions on the BioXp, then clone them into a single bicistronic construct for expression and screening."

The MTAC application is expected to accelerate therapeutic antibody development, which relies on iterative improvement of the molecules' affinity, specificity, stability, solubility, and immunogenicity. MTAC provides researchers with the freedom to avoid common subcloning practices-entirely bypassing them, by building antibody constructs and cloning directly into multiple proprietary vectors on the benchtop with a one-step, overnight operation.

For more information on the BioXp™ 3200 Gene Builder and its applications, visit www.sgidna.com.

The Gibson Assembly® Method is also available under commercial license. For more information, contact us at info@sgidna.com.



About SGI-DNA

At SGI-DNA, our mission is to develop revolutionary synthetic genomics platforms that accelerate advances in drug discovery, precision medicine, DNA data storage, and industrial design; bridging the gap between the digital and biological worlds. For more information, please visit www.sgidna.com.

Contact Us

Ruth Petersen
Director of Marketing, SGI-DNA
rpetersen@sgidna.com
(858) 754-2979