

CASE STUDY

Supporting the success of new test development with AnteoBind and Assay Contract Services



Overview

The Ellume AnteoTech relationship goes back over seven years. Ellume makes use of AnteoTech's unique AnteoBind™ technology to support significantly improved sensitivity in a number of tests, including Ellume's COVID-19 Home Test. The two companies have a strong partnership and are actively discussing further development opportunities to deliver diagnostic solutions to the market.

Critical in any lateral flow test is the conjugation of detector particles with the targeted antibody or antigen. Ellume uses their patented quantum dot technology of fluorescent nanoparticles as the detector particles for its at-home test. AnteoTech supplied Ellume with the AnteoBind-based ready-to-use kit to enhance binding capability, increasing the conjugation success rate maintaining batch stability and reproducibility of the fluorescent nanoparticle.

What is AnteoBind™ and how does it work?

AnteoBind is a nanosized molecular glue (polymeric metal ions), which is used in a simple step process to facilitate multipoint binding of polymers, antibodies, and proteins to synthetic substrates in assay development.

A single binding point is not strong enough to bind a metal ion to a synthetic surface or to bind a biomolecule to the metal ion. AnteoBind technology overcomes this limitation by using polymeric metal ions that form multiple binding points with both the underlying surface and the biomolecule of interest.

The improved conjugation process increases the performance for diagnostic assays and enables superior quality control, biomarker candidate screening and efficacy-measurement processes in biopharmaceutical and vaccine development.

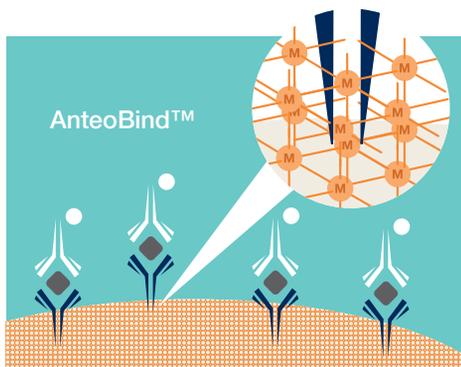


Figure 1 Binding with AnteoBind utilises multiple chelation points.

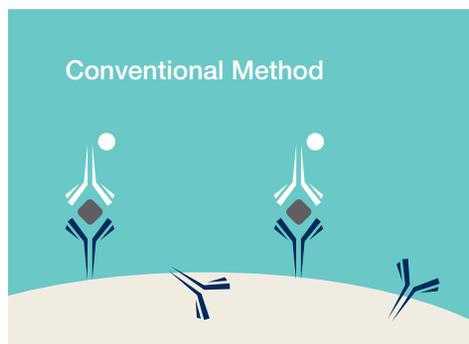


Figure 2 Conventional covalent attachment chemistry tends to damage the attached biomolecules.

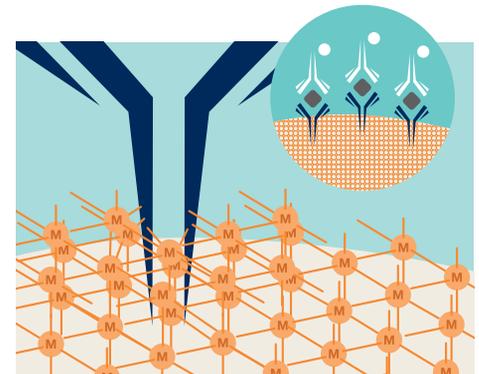


Figure 3 AnteoBind is a molecular glue comprised of polymeric metal ions that chelate to available electrons donating groups on synthetic surfaces and biomolecules.



Collaboration leads to success

With the help of AnteoTech's AnteoBind technology, the Ellume COVID-19 Home Test provides accurate results in 15 minutes or less, detecting SARS-CoV-2 in both symptomatic and asymptomatic individuals. Ellume's offering is the first test which utilizes AnteoBind to receive FDA Emergency Use Authorization (EUA).

AnteoTech's relationship and work with Ellume demonstrates the effectiveness of the use of AnteoBind to increase sensitivity, provide conjugation stability and facilitate batch to batch reproducibility for a regulatory approved assay manufactured at scale.

“Our recent Emergency Use Authorization was a key milestone in our mission to make a significant contribution to global health. AnteoTech's AnteoBind has greatly assisted us in the development of a highly sensitive test that is vital for an effective COVID-19 mitigation strategy.

We look forward to our continued partnership with AnteoTech as we deliver accurate diagnostic solutions to the market.”

Dr. Sean Parsons, Chief Executive Officer of Ellume

Contract Services

AnteoTech offers assay development support in a number of different ways:

1 AnteoBind based ready-to-use kits to streamline and improve the conjugation process. The kits are versatile and compatible with carboxylated magnetic particles, latex and europium nanoparticles. For sales enquiries please email sales@anteotech.com

2 Bioconjugation and Assay Development Services. Assay Development Services draws on the teams' biomedical research and assay development experience, particularly in the areas of complex conjugation assay design and quantitative assay design. Our Assay Development Service is centered on the application of our patented nanosized molecular glue, AnteoBind to improve the performance, reproducibility and sensitivity of assays.

Our team has experience across a range of assays – gold, fluorescent, europium, magnetic, collaborating with reader companies globally to deliver a solution that meets our customer's needs.

AnteoTech is an ISO 13485 certified assay developer. We are developing lateral flow tests, including a COVID-19 Antigen Rapid Test, and proof of concept COVID-19 Flu A Flu B Multiplex test and a multiplex test for Sepsis.

AnteoTech's assay development services are flexible, offering tiered options ranging from basic antibody conjugation to full commercial assays from design right through to validation. If you would like to discuss your assay development needs, contact us at:

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