EXAZYM
The BOLD Immunoassay Signal Amplifier

Introducing Exazym®

High sensitivity immunoassays for everyone

Cavidi has launched the Exazym® signal amplification technology to bring ultra-sensitive detection levels to conventional immunodiagnostic assays. Intended applications for this technology include translational research, health screening and diagnostics testing.
The aim of Exazym® is to provide greater sensitivity in existing assays or in assays under development without using any new instrumentation. Exazym® is an add-on step that can be implemented on assays. We have accomplished this with a novel approach that uses conventional assay instrumentation found in most labs.
Exazym® can enable you to provide much earlier detection in your diagnostic assays.

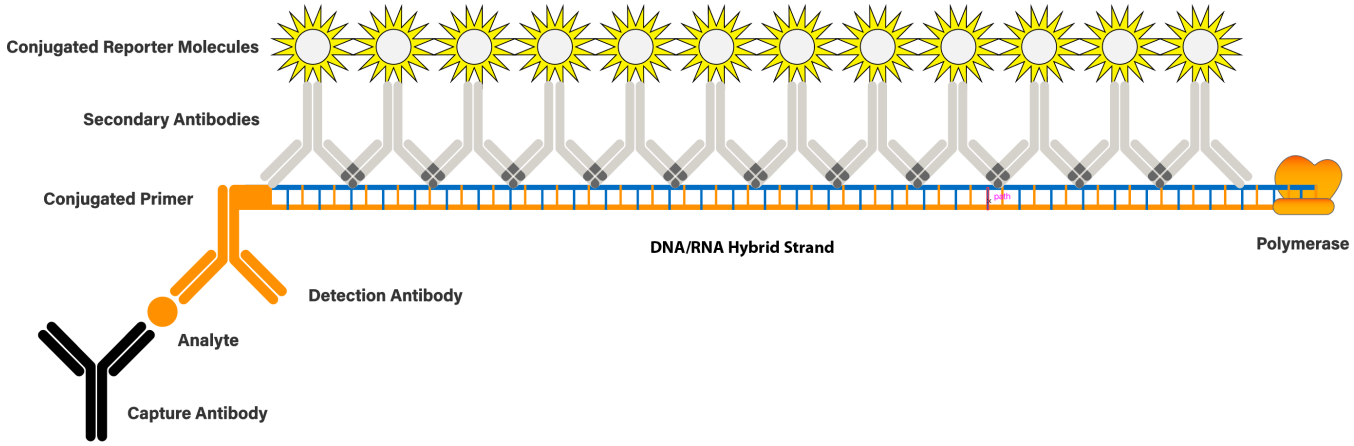

***Illustration 1**. Cavidi new detection method BOLD amplifies immuno assay signals up to 100 times.*

Developed to allow everyone to achieve high sensitivity without new instrumentation

- Easy extra step added to previously established immune assay
- Keep already validated antibody pairs
- Minimal extension of assay time
- Applicable to screening platforms
- Proven technology with high sensitivity, specificity, and accuracy

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The BOLD science behind Exazym®

Binding Oligo Ladder Detection (BOLD)

BOLD technology delivers

Exazym® is an add-on reagent licensed to academic research groups as well as immunoassay kit producers. It is based on a new detection method called Binding Oligo Ladder Detection, or **BOLD** for short. A primer conjugated to the detection antibody works with polymerase to create a long ladder of DNA to which secondary antibodies with reporter molecules selectively bind. This is how **BOLD** amplifies immunoassay signals by up to 100 times. The technology is broadly applicable for immunoassays and independent of instrument platforms. The amplification step works in room and higher temperatures. The low temperature aspect allows applying **BOLD** for temperature sensitive ligands and antibodies.

Designed to achieve high sensitivity

Measurements of low abundance biomolecules remain a critical challenge in many clinical and diagnostic applications due to insufficient sensitivity. While some clinical diagnostic measurement methods have made significant advances in sensitivity, there are still many potential disease biomarkers that exist in accessible biofluids at levels below the detection limits of these techniques or where an increased precision is desirable. Furthermore, they require specialized instruments, increasing the cost and logistical complexity of large-scale adoption.

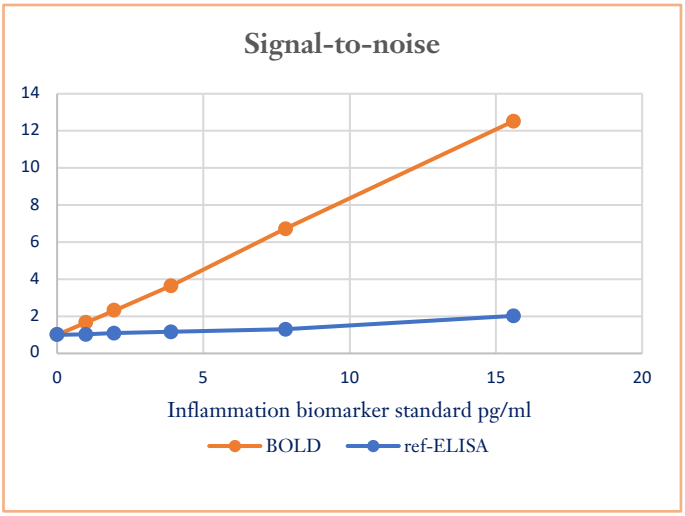

Fig 1. *Comparing the results applying BOLD to a standard ELISA. The antigen studied from a family of key inflammatory biomarkers (cytokine) used to assess level of ongoing inflammation in a number of disease conditions.*

High Sensitivity

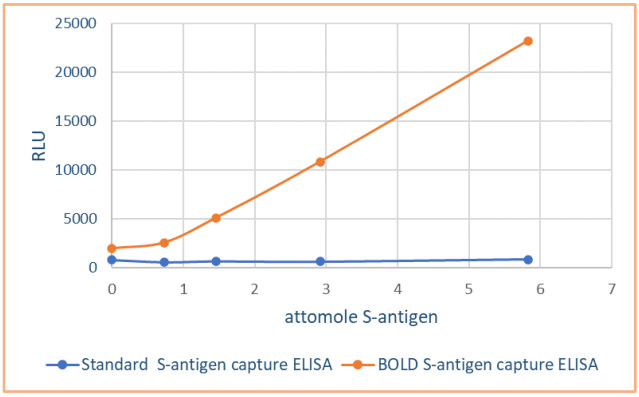

Fig 2. *Detection of low attomoles of the SARS-CoV-2 spike antigen, demonstrating the extreme high level of sensitivity using BOLD.*

Wide Range

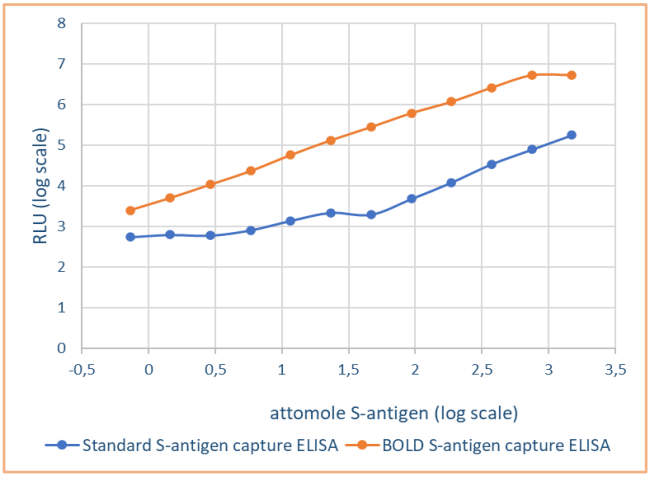

Fig 3. *The application of BOLD allows detection of SARS-CoV-2 spike antigen over a wide range of concentrations.*

Ready for the future

There will be an increased need of immunoassays to allow the precise detection of biomarkers. The ability to detect biomarkers in low concentrations and distinguish them from background noise has been a limiting factor for most immunoassays. **BOLD** addresses this by allowing users to reliably detect biomarkers at extremely low concentrations. Unlike other signal amplification methods, **BOLD** with Exazym® as an add-on reagent can be used with existing immunoassay to dramatically lower the limit of detection without the need for new expensive equipment.

Exazym® was developed by Cavidi, a Swedish company with 30 years of experience at the forefront of biomarker detection. We specialize in areas where high sensitivity, low background, and precision are key. Our customers include hospitals, patient clinics, private laboratories, the pharmaceutical industry, and research institutions worldwide.

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