

The ViBE™ Platform

*Highly Sensitive, Next Generation Acoustic Assays
in Complex Sample Matrices*



Acoustic Assays:
Sensitive. Precise. Walk-away.



BIOSCALE

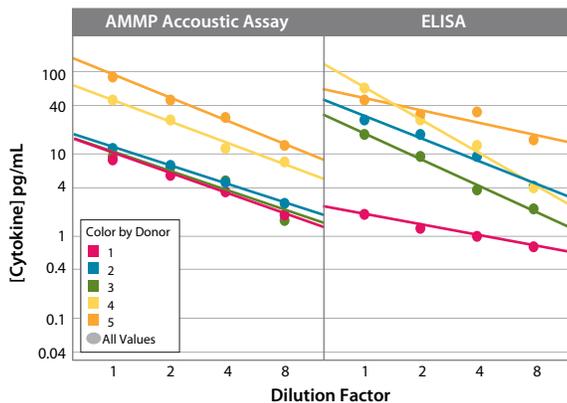
The ViBE Platform

The ViBE platform enables non-optical, acoustic protein assays utilizing BioScale's proprietary AMMP™ (Acoustic Membrane MicroParticle) technology. Acoustic Assays provide greater sensitivity, improved reproducibility and complex sample analysis, allowing increased productivity and efficiency over traditional ELISA and Western blot methods.

Acoustic Assay Advantages

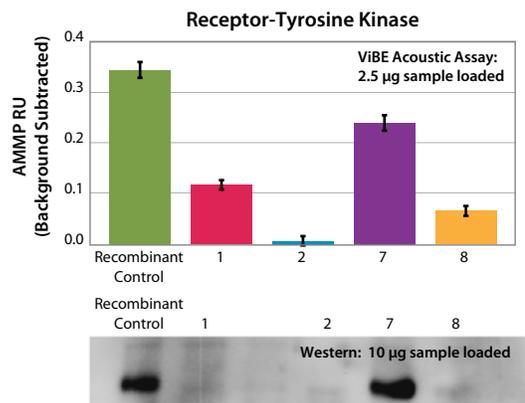
- Up to 10X more sensitivity than the best optical ELISA—quantitate analyte concentrations as low as sub-pg/mL
- Non-optical detection and/or lack of enzyme amplification enables sampling in serum, plasma, tissue lysates, urine, circulating tumor, or cells
- Assay development in days, not months
- Unattended operation for up to 288 samples
- Single-digit assay precision linear over 2 logs; exceptional dilution linearity
- Use <10% of the antibody required by ELISA—20 ng of antibody per well
- Recover instrument cost within first year

Exceptional Downward Linearity



Acoustic Assays showed superior downward linearity in plasma behavior of all platforms tested; decisive for large pharma ViBE purchasing decision.

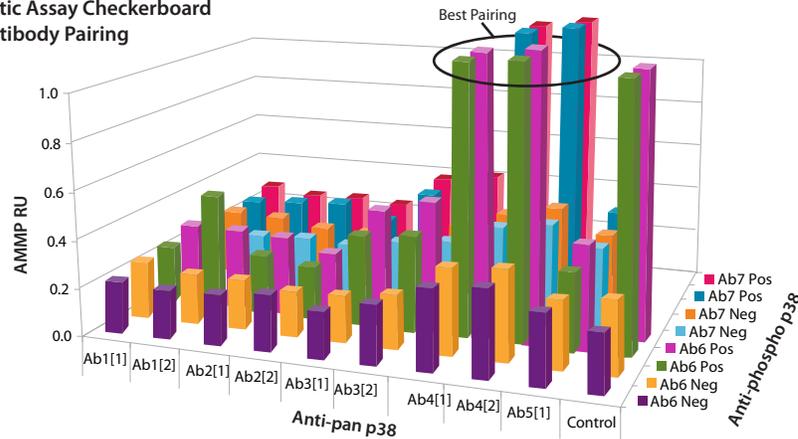
Increased Sensitivity



ViBE Acoustic Assays have a unique ability to quantify minute differences in protein expression even when using less starting material than highly sensitive chemiluminescent Western blots.

Quick Determination of Best Antibody Pairing

Acoustic Assay Checkerboard for Antibody Pairing



Within hours, find out optimal antibody pairing, multiple orientations and configurations and binding strength in one experiment.

Applications

Acoustic Assays allow protein and biomarker analysis, biomarker discovery and assay development in analytical laboratories, allowing advances in oncology, inflammation, cardiovascular and CNS disease research. Using the ViBE platform, scientists are now able to address the limitations of optical ELISA—enabling discovery of targets that may have previously been missed and the detection of biologically important targets earlier in their expression profile.

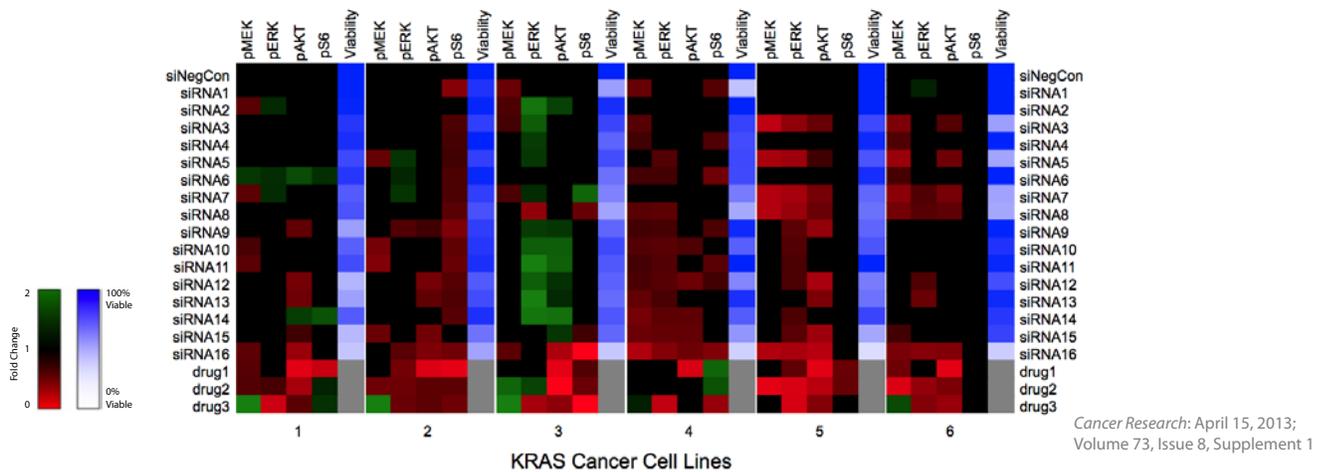
Research Areas

- Pharmaceutical drug discovery and development
- Protein research
- Preclinical and clinical assays
- Translational biology and medicine
- Biochemical pharmacology
- Pharmaco-kinetics and pharmaco-dynamics

Applications

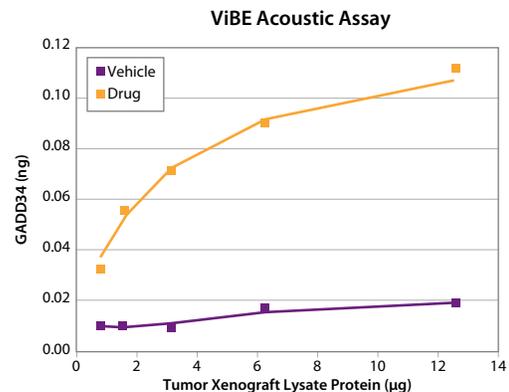
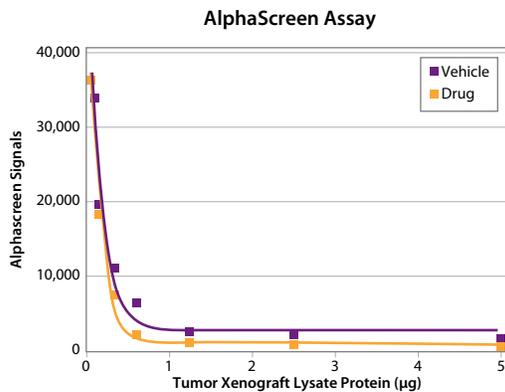
- Candidate biomarker selection and antibody pair selection
- Biomarker expression and screening in patient cohorts
- Cytokine and phosphoprotein assays
- Kinase pathway and signaling pathway analysis
- Early detection of cancer biomarkers and cancer research
- Cell number quantitation of relevant populations

Test Multiple Conditions in One Experiment



ViBE Acoustic Assays are used to define functional signal transduction nodes in the KRAS pathway across different cancer cell lines. Scientists at UCSF targeted a combination of 6 signaling molecules to disable a KRAS signaling node, using 20 different experimental conditions across 6 different cell lines, resulting in an induction of apoptosis. Using conventional methodology, this type of detailed study would have been very difficult, requiring over 800 Western blots. ViBE enabled the study to be completed in weeks vs. months.

Detection in Complex Samples

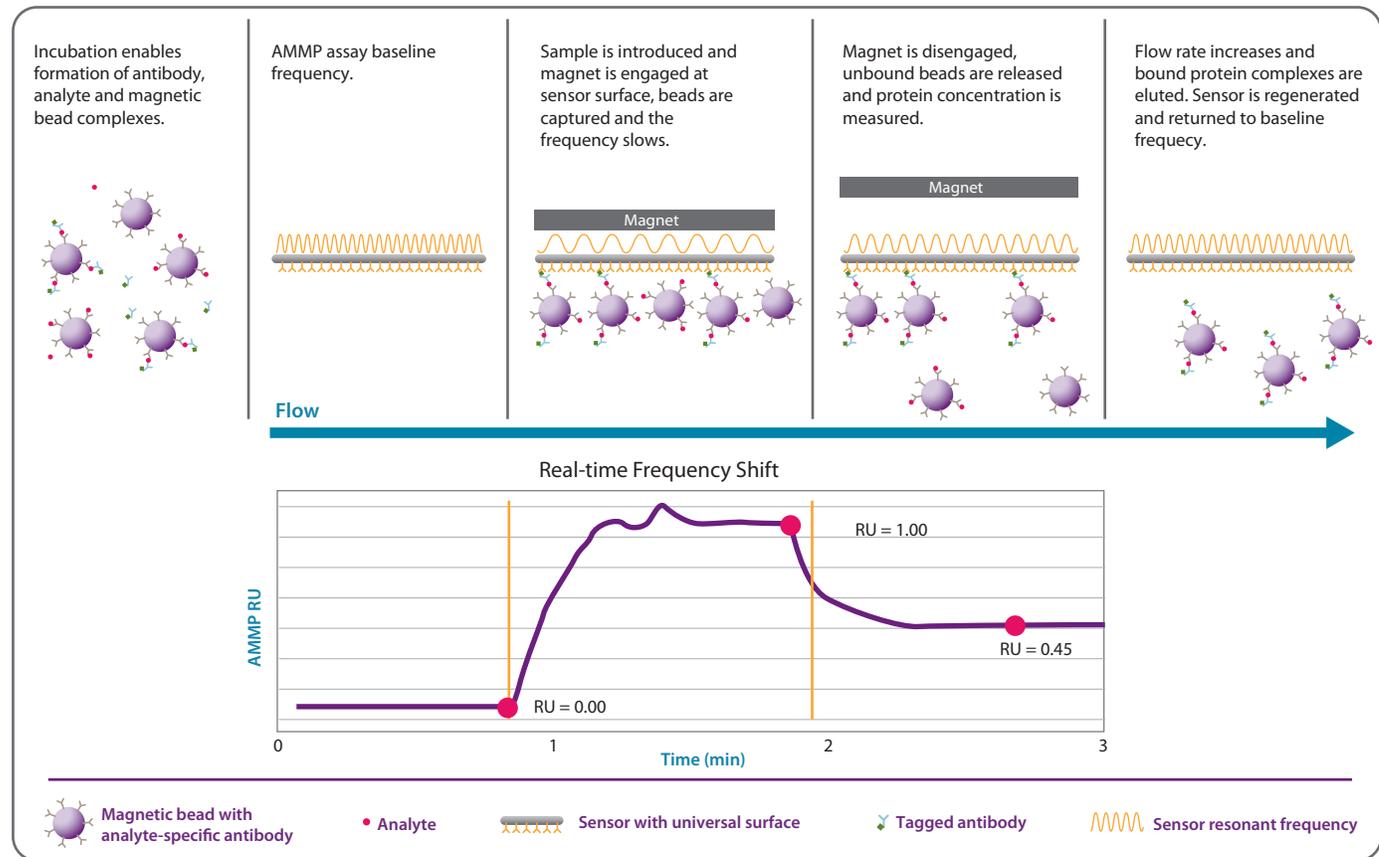


ViBE Acoustic Assays can significantly distinguish differences between treatment groups in tumor xenograft lysate samples as compared to AlphaScreen. Z. H. Yan et al., Analysis of two pharmacodynamic biomarkers, *Anal. Biochem.*, 2010.

Acoustic Assays: Sensitive. Precise. Walk-away.

No-Wash, Homogeneous AMMP Technology

ViBE Acoustic Assays are homogeneous, requiring no time-consuming wash and incubation steps. Proteins are measured in their native state. Several configurations can be quickly adapted based on your science.



About the Platform

The ViBE Workstation

- 8-channel system accommodates three 96-well microplates on deck
- Load sample, standard and reagent microplates and walk away
- Hands-off assay automation lets you run 8–288 samples unattended



Disposable ViBE Cartridge

ViBE Acoustic Assays

- The proprietary, disposable Acoustic Sensor Cartridge can be regenerated and is available in one-, two- and three-plate formats
- Use pre-configured total protein kits or analyte-specific kits and reagents for a variety of cancer markers, phosphoproteins, cytokines and interleukins
- BioScale offers custom assay development for specific customer needs

ViBE Software

- An intuitive wizard-style interface simplifies assay setup
- Track assay progress with an informative, real-time data display
- E-mail notifications of important events keep you posted when you're not in the lab



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