BIODESY

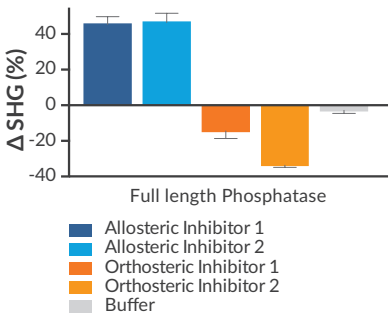
Hit Your Target Conformation

The Biodesy® Delta employs second harmonic generation (SHG) technology to measure conformational change at high throughput, enabling a more immediate understanding of the mechanistic and functional consequences of ligand binding. The conformational signatures revealed by the Delta enable discrimination of activators from inhibitors and allosteric from orthosteric interactions, even for the most challenging targets.

Soluble Proteins

The Biodesy Delta is amenable to any soluble protein, regardless of size or structure. The Delta has been used to screen a wide variety of soluble target classes, including kinases, phosphatases, intrinsically disordered proteins, and non-enzymatic proteins.

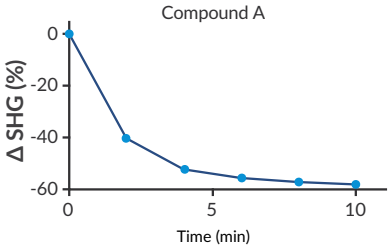
Figure 1: Delta discriminates allosteric from orthosteric modulators of SHP2 phosphatase.



Integral Membrane Proteins

Integral membrane proteins (IMPs) represent the largest class of drug targets but relatively little is known about the conformations they adopt. The Biodesy Delta uses small amounts of stabilized IMPs per well, thereby unlocking structural insights for this class of proteins through high throughput conformational studies.

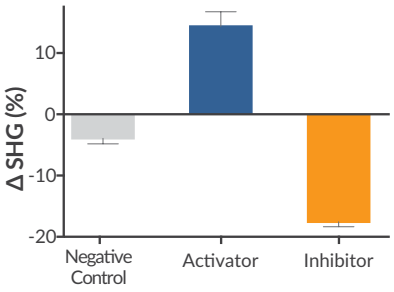
Figure 2: Compound A induces a conformational response by amphipol-stabilized integral membrane protein.



Membrane-Associated Proteins

Biodesy uses a biomimetic lipid bilayer surface, making it uniquely suited to screen full-length membrane-associated protein conformational change.

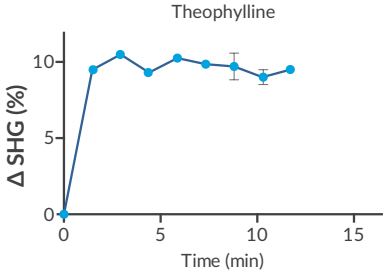
Figure 3: Delta discriminates activators from inhibitors of membrane-associated PKC-theta.



Nucleic Acids

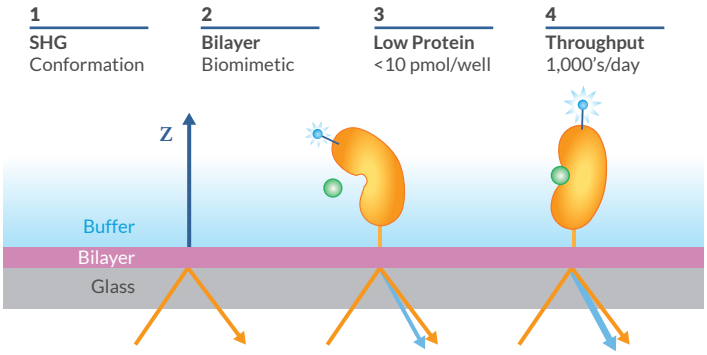
DNA and RNA are emerging drug targets and there is high demand for characterizing oligonucleotide structural changes associated with binding interactions. The Biodesy Delta has been used to monitor conformational responses of nucleic acids upon binding to small molecules and proteins.

Figure 4: Theophylline induces a conformational response by the RNA aptamer.



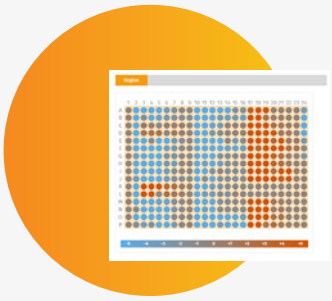
Uniquely Delta

The Biodesy Delta employs orientation-sensitive, second harmonic generation (SHG) technology to measure ligand-induced conformational change at high throughput and with low protein consumption. Targets are tethered to a lipid bilayer surface at the bottom of 384 well plates, enabling your protein to sample its conformational landscape.



Biodesy Delta System

CONFORMATION CHANGES EVERYTHING



Structural insight in seconds

- Designed for your screening, follow-up and SAR workflow
- Cluster analytes based on potency, mechanism and function
- All-in-one assay kits include plates, lipid bilayer surface, SHG-active dye, and tips
- Intuitive software and integrated robotics for simple experimental setup and walk-away operation

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