

BIND<sup>®</sup> from SRU Biosystems is a label-free, universal assay platform for a wide range of cell-based applications. The platform is comprised of a BIND<sup>®</sup> Reader and associated BIND<sup>®</sup> Biosensor plates. An independent, optical biosensor is incorporated into the bottom of each well of the Biosensor plates. BIND Biosensors are available with a number of optimized surfaces for measuring biological responses of both adherent and suspension cell types including primary cells. Robust, reproducible responses are produced for both recombinant and endogenous targets requiring as few as 1,000 cells per well in 1536-well format. BIND assays are non-destructive, live cell assays that are more physiologically relevant because they are label-free.



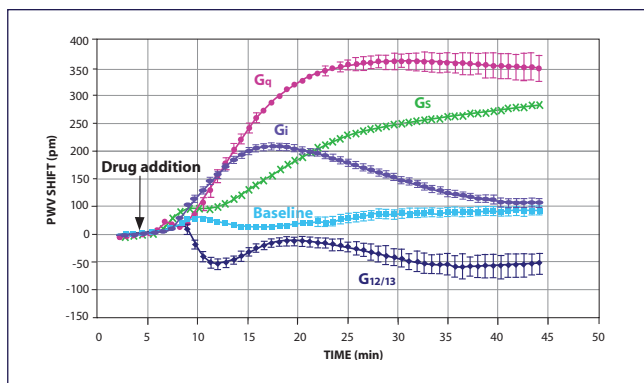
### BIND<sup>®</sup> Cell-Based Applications

- GPCR pathway characterization
- Ion channel assays
- Endogenous receptor modulation
- Cell morphology and adhesion assays
- Pharmacological profiling studies

### Biosensor Properties

- Universal surface available for cell attachment using an optimized mixture of ECM proteins
- Non-cytotoxic allowing cell use after assay measurement
- Compatible with liquid handling and tissue culture procedures
- Highly resistant to organic solvents including DMSO up to 5%

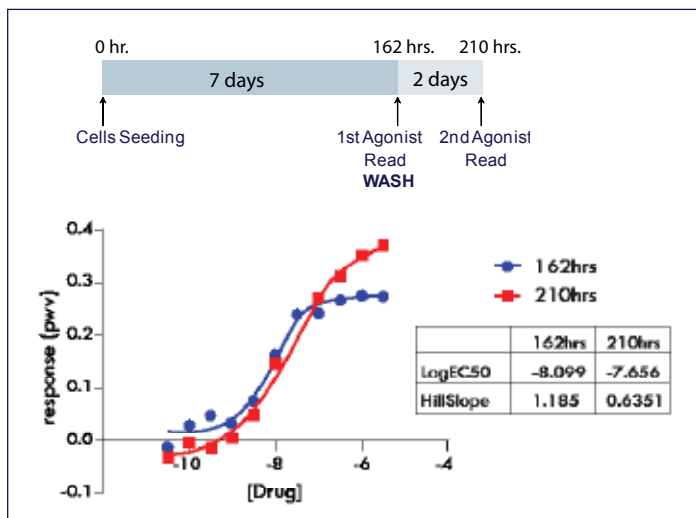
### Information-rich, Live Cell GPCR Assays



*Endogeneous GPCRs were activated with natural ligands known to stimulate specific  $G\alpha$  subunit pathways. Distinct temporal responses are detected for individual GPCR subtypes.*

BIND is a highly sensitive technology that enables assessment of endogenous and recombinant receptor activation for  $G_i$ ,  $G_s$ ,  $G_q$  and  $G_{12/13}$ -coupled GPCRs. Traditional label-based assays detect GPCR activation using a single read-out such as  $Ca^{++}$  flux or cAMP levels. Thus, multiple assays must be used for dual-coupled receptors or to examine pathway switching, and in some cases require construction of artificially-coupled receptors. In contrast, a single BIND assay produces information-rich data that detects activation of  $G_i$ ,  $G_s$ ,  $G_q$  and  $G_{12/13}$ -coupled GPCRs via temporal signatures.

## Suspension, Adherent and Primary Cell Use



Rat cortical astrocytes were seeded on BIND Biosensors and stimulated with noradrenaline after 7 days. Following BIND measurement, cells were washed and cultured an additional 2 days. Cells were stimulated with noradrenaline and responses measured. Data courtesy of J. Brown, GSK.

BIND® Biosensor plates are compatible with primary cells, suspension cells and adherent cells. In addition, Biosensors and BIND measurements are non-cytotoxic allowing re-use of cells, particularly beneficial when working with a limited number of primary cells.

### Examples of Primary Cells

- Human cortical neurons
- Rat astrocytes
- Blood neutrophils
- Platelets
- HUVEC

### Examples of Cell Lines

- CHO-K1
- HEK 293
- Jurkat, THP-1
- H292, A431, RBL
- SH-SY5Y
- U2OS, MCF-7
- NIH-3T3, 3T3-L1
- C2-C12, RD, PC-12

## Biosensor Surfaces for Cellular Applications

SRU Biosystems offers a number of optimized surfaces for use with both adherent and suspension cell types. Bare TiO<sub>2</sub> plates are commonly used with non-adherent cells, while our proprietary CA1 and CA2 surfaces promote cell attachment leading to more physiologically relevant biological responses. Cell-based BIND Biosensors are provided with lids and are available in 96-, 384-, 384lv- and 1536-well microplate formats.

## Quality Testing

SRU Biosystems rigorously tests each well of every microplate prior to shipping to ensure a high level of biosensor quality and superior assay performance. SRU tests a variety of parameters including uniformity, lot-to-lot consistency, shelf life and integrity of surface coatings.

### Cellular Biosensors

TiO-96-CM	Bare TiO <sub>2</sub> 96-well plate, flat-bottom with lid
TiO-384-CM	Bare TiO <sub>2</sub> 384-well plate, flat-bottom with lid
TiO-384LV-CM	Bare TiO <sub>2</sub> low volume 384-well plate, flat-bottom with lid
TiO-1536-CM	Bare TiO <sub>2</sub> 1536-well plate, flat-bottom with lid
CA1-96-M	Cell attachment matrix, 96-well plate, flat-bottom with lid
CA1-384-M	Cell attachment matrix, 384-well plate, flat-bottom with lid
CA1-384LV-M	Cell attachment matrix, low vol. 384-well, flat-bottom with lid
CA1-1536-M	Cell attachment matrix, 1536-well plate, flat-bottom with lid
CA2-96-M	Cell attachment matrix, 96-well plate, flat-bottom with lid
CA2-384-M	Cell attachment matrix, 384-well plate, flat-bottom with lid
CA2-384LV-M	Cell attachment matrix, low vol. 384-well, flat-bottom with lid
CA2-1536-M	Cell attachment matrix, 1536-well plate, flat-bottom with lid

BIND Biosensor microplates have the following maximum volumes: 96-well (300 µl); 384-well (70 µl); low volume 384-well (28 µl); 1536-well (5 µl).



**To place an order:**

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