

# Epic<sup>®</sup> Label Free Technology

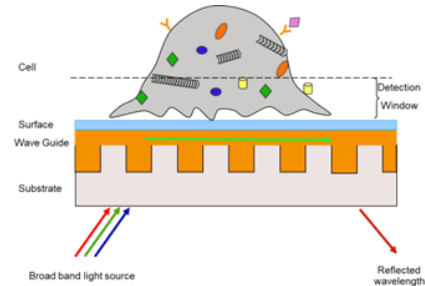
An enabling technology for target validation and phenotypic screening

**aurelia**  
bioscience

bioassays + screening

## How the technology works

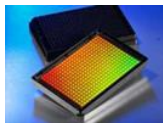
- Cells are cultured on proprietary optical biosensor microplate and then monitored in the PerkinElmer Enspire™ label free reader
- The system detects real time changes in cells as a result of cytoskeletal rearrangement and protein movement close to the cell membrane in response to a stimulus
- The profile is termed “Dynamic mass redistribution” DMR
- The response profile is a cellular signature or phenotypic fingerprint of the cell responding to the stimulus



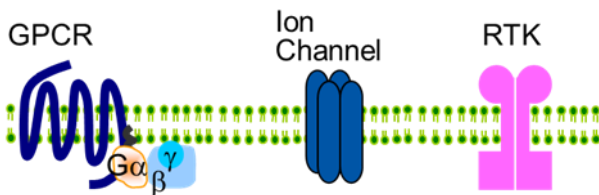
## Key Advantages

Cell-based label free assays are; generic, requires no genetic manipulation, phenotypic, non-destructive, no interference from auto-fluorescence of cells or compounds.

The technology is complimentary to other techniques and can be used for novel biology when the exact mechanism is unknown.

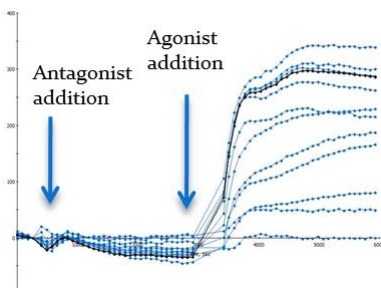


## Applications:



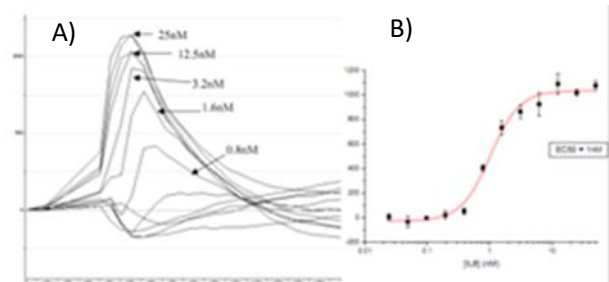
The technology has successfully detected cellular responses for primary, endogenous & over-expressed membrane targets, including: GPCR's, ion channels and RTK

### Two addition method for antagonist screening



HEK293 cells expressing the Histamine H1 receptor were first treated with a H1 antagonist followed by addition of a fixed EC<sub>80</sub> concentration of an agonist

### Real time Neutrophil response to IL8



Neutrophils isolated using density gradient centrifugation, incubated in label free plates (non-adherent) and treated with agonist / antagonists. A) Response profile to IL-8 B) Concentration response graph of the peak response