

# LigandTracer<sup>®</sup> GREY



[www.ligandtracer.com](http://www.ligandtracer.com)

**ridgeview**  
instruments ab

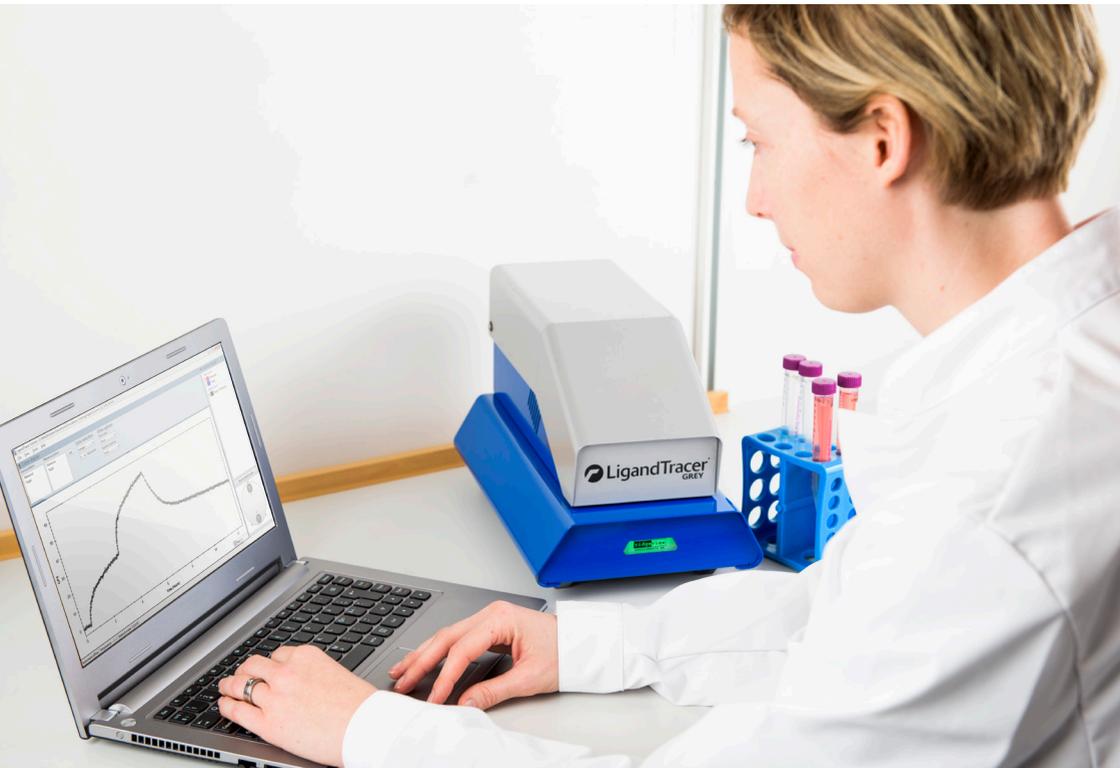
# Understand how your ligand interacts with living cells.

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LigandTracer measures interactions on living cells, minute by minute, during and after incubation. The binding curve displays the amount of cell-associated ligand over time, and contains information about affinity, kinetics and the interaction mechanism.

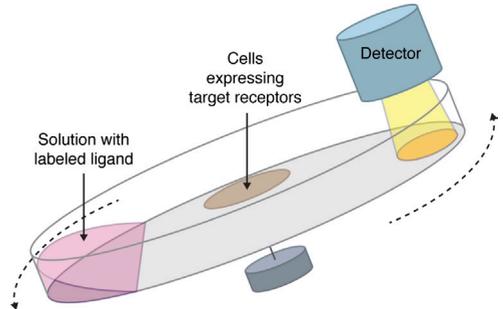
## Key features:

- Monitor the dynamics of protein-cell interactions in real-time, using  $^{125}\text{I}$ -labeled proteins
- Derive the affinity, on/off-rate and specificity
- Interactive self-learning package included
- Affordable, easy to use and saves labor time
- Maintenance free and low running costs
- Run in incubator, room temperature or cold room



# Technology

Cells are seeded in a local part of a cell dish with the opposite side used as a reference to correct for background signal. The dish is placed on an inclined, slowly rotating support and liquid containing a  $^{125}\text{I}$ -labeled ligand (e.g. a protein or a small synthetic molecule) is added. Continuously following the ligand signal on the cells provides an accurate estimation of the kinetics of the interaction, without washing steps or the need to count cells.



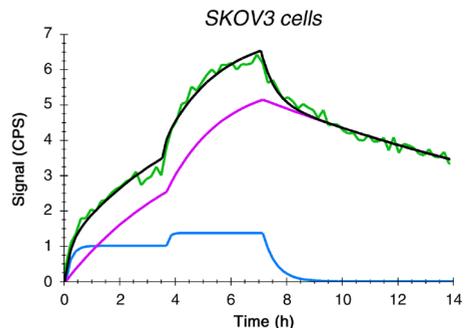
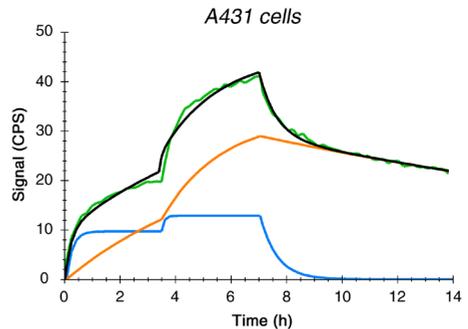
## Application Example

### Explore biological mechanisms in greater detail

The interaction between the epidermal growth factor (EGF) and its receptor (EGFR) was detected on A431 and SKOV3 cells (green). By fitting the LigandTracer data to a mathematical model (black\*), it was possible to decipher the kinetics and affinity of the binding of EGF to EGFR monomers (blue\*), EGFR homodimers (orange\*) and EGFR-HER2 heterodimers (purple\*).

It was observed that the homodimer interaction was only present on A431 cells (EGFR $^{+++}$ , HER2 $^{+}$ ) and that the heterodimer interaction only occurred on SKOV3 cells (EGFR $^{+}$ , HER2 $^{+++}$ ). Such improved understanding of dimerization patterns and allosteric modulation can provide important clues about the underlying biology.

\*Fitted curves



# Examples of publications with LigandTracer Grey

## **NRP1 presented in trans to the endothelium arrests VEGFR2 endocytosis, preventing angiogenic signaling and tumor initiation.**

*Koch S, van Meeteren LA, Morin E, Testini C, Weström S, Björkelund H, Le Jan S, Adler J, Berger P, Claesson-Welsh L.*

Dev Cell. 2014. 28(6):633-646.

## **Generation and evaluation of bispecific affibody molecules for simultaneous targeting of EGFR and HER2.**

*Ekerljung L, Wällberg H, Sohrabian A, Andersson K, Friedman M, Frejd FY, Ståhl S, Gedda L.*

Bioconjug Chem. 2012. 23(9):1802-1811.

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### **SPECIFICATIONS**

<b>Size</b>	0.2x0.2x0.4 m (w×h×d)
<b>Detector</b>	Solid state X-ray detector
<b>Recommended label</b>	<sup>125</sup> I
<b>Noise</b>	< 2 counts per second (typical value)
<b>Cell dish holder</b>	Adapted for a dish diameter of 87 - 89 mm
<b>Temperature control</b>	+7 to +37 °C
<b>Accessories</b>	Delivered with a laptop computer

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## **About us**

Ridgeview Instruments AB is a biotechnology company that develops, markets and sells instruments in the LigandTracer series. To evaluate and understand your data we provide the software TraceDrawer, designed to extract relevant information out of your interaction data in an effective and flexible manner.

Ridgeview Instruments also has a strong track record in supporting companies in the development of software, hardware and assays. Our proven performance history in biotech business makes us a partner to rely on.