

LigandTracer[®] **GREEN**



www.ligandtracer.com

ridgeview
instruments ab

Understand how your ligand interacts with live cells

LigandTracer Green is made for cell-biologists. Introducing time into the binding assay results in more detailed and robust characterization of interactions.

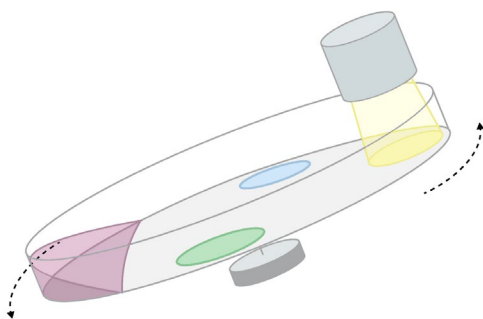
Key features

- Monitor the dynamics of protein-cell interactions in real-time, both during incubation and after wash
- Flexible platform compatible with a large number of applications with protein binding to receptors on living cells being the most common
- Derive the affinity, on/off-rate, specificity and dose/time dependent target occupancy
- Interchangeable detectors for different sets of fluorophores
- Interactive self-learning package included
- Affordable, easy to use and saves labor time
- Maintenance free and low running costs



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 fluorescently labeled ligand (e.g., a protein) is added. Continuously following the ligand signal on the cells provides an accurate estimation of the interaction kinetics, without washing steps or the need to count cells.

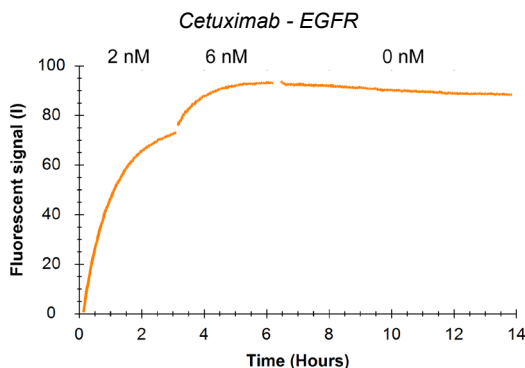


- Cells expressing target receptors
- Reference, e.g., negative cells
- Detection area
- ▲ Solution with labeled ligand

Application Example

Characterize therapeutic antibodies

LigandTracer was used to study the affinity and kinetics of the therapeutic antibodies cetuximab (Erbix), trastuzumab (Herceptin) and pertuzumab (Perjeta) binding to epidermal growth factor receptors expressed on tumor cells. The interactions were monitored for many hours, suitable for the characterization of the slow on (k_a) and off (k_d) rates of these high affinity antibodies. In fact, time to equilibrium when incubating 1 nM of these antibodies range from 10 h to 39 h. Information about interaction kinetics or dynamics can be useful for understanding drug residence time and appropriate dose.



Interaction	k_a ($M^{-1}s^{-1}$)	k_d (s^{-1})	K_D (pM)
Cetuximab - EGFR	9.5×10^4	1.9×10^{-6}	20
Trastuzumab - EGFR	1.8×10^4	7.1×10^{-6}	394
Pertuzumab - EGFR	7.1×10^4	3.1×10^{-6}	43

Examples of publications with LigandTracer Green

Real-time characterization of antibody binding to receptors on living immune cells

Bondza S, Foy E, Brooks J, Andersson K, Robinson J, Richalet P, Buijs J.
Front Immunol. 2017, 8:455.

Live Cells versus Fixated Cells: Kinetic Measurements of Biomolecular Interactions with the LigandTracer Method and Surface Plasmon Resonance Microscopy

Dong T, Han C, Liu X, Wang Z, Wang Y, Kang Q, Wang P, Zhou F.
Mol Pharmaceutics. 2023, 20(4):2094-2104.

Specifications

Detector	Interchangeable LED-based fluorescence detector	
Detector models	BlueGreen	488 nm - 535 nm (ex/em)
	BlueLime	488 nm - 575 nm (ex/em)
	GreenOrange	535 nm - 589 nm (ex/em)
	OrangeRed	589 nm - 632 nm (ex/em)
	RedNIR	632 nm - 676 nm (ex/em)
	RedNIR ⁺	632 nm - 700 nm (ex/em)
	NIR ⁺⁺ IR	740 nm - 810 nm (ex/em)
	See www.ligandtracer.com for the current list of available detectors	
Size	0.2×0.25×0.4 m (w×h×d)	
Cell dish holder	Adapted for a dish diameter of 87 - 89 mm.	
	Compatible with MultiDish 2×2 <i>cell culture</i> and MultiDish 2×2 <i>for coating</i> , for e.g., suspension cells	

LigandTracer Green comes as a complete package with laptop, cell culture bracket, learning material, LigandTracer Control and TraceDrawer evaluation software.

About us

Ridgeview Instruments AB is a Swedish biotechnology company focused on providing instruments and software for studying biological interactions in real-time. Our cell-based interaction technology LigandTracer® is used worldwide, especially in the field of cancer research. To evaluate and understand your data we provide TraceDrawer® software, designed to extract relevant information in an effective and flexible manner, supporting data analysis for many real-time instrument platforms.

Ridgeview Instruments has a strong research focus with a strong track record in supporting companies and universities in the development of assays and software.