About Gator

Gator Bio develops, manufactures, and markets life science analytical technologies including Gator® systems based on the next-gen Biolayer Interferometry. The company was founded by the industry veterans Dr. Hong Tan and Mr. Bob Zuk.

Previously, Dr. Hong Tan founded ForteBio® and led the invention of Octet® BLI technology. Gator Bio together with its sister companies have more than 600 employees worldwide and sell both diagnostics and research-use-only products.

The company is ISO13485 certified. Gator® systems have been adopted by scientists and researchers in North America, Asia Pacific, Europe, and Middle East. The investors of the company include Legend Capital, Matrix Partners, Maison Capital, Qiming Venture, HillHouse, Sequoia Capital, Kaiser Permanente, and Sinovation etc.

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Gator® Pilot

Gator® Prime

Gator® Plus

Gator® Pivot

Gator® Pro

Performance					
Type of analysis	Proteins, antibodies, peptides, nucleic acids,	liposomes, viruses, small molecules			
Simultaneous reads	4	8	8	8 and 16	8, 16, 24, and 32
Maximum sample capacity	40	168	456	816	1152
Molecular weight	> 150 Da	> 150 Da	> 150 Da	> 150 Da	> 150 Da
Association rate (k_{on})	10^1 to 10^7 $M^{-1}s^{-1}$	10^1 to 10^7 $M^{-1}s^{-1}$	10^1 to 10^7 $M^{-1}s^{-1}$	10^1 to 10^7 $M^{-1}s^{-1}$	10^1 to 10^7 $M^{-1}s^{-1}$
Dissociation rate (k_{off})	10^{-6} to 10^{-1} s^{-1}	10^{-6} to 10^{-1} s^{-1}	10^{-6} to 10^{-1} s^{-1}	10^{-6} to 10^{-1} s^{-1}	10^{-6} to 10^{-1} s^{-1}
Affinity constant (K_D)	10 pM – 1 mM	10 pM – 1 mM	10 pM – 1 mM	10 pM – 1 mM	10 pM – 1 mM
Quantitation range (Protein A biosensor)	0.02 – 2000 µg/mL	0.02 – 2000 µg/mL	0.02 – 2000 µg/mL	0.02 – 2000 µg/mL	0.02 – 2000 µg/mL
Binning capacity	6x6	12x12	16x16	20x20	32x32
Baseline noise (RMS)	≤ 4 pm	≤ 4 pm	≤ 4 pm	≤ 4 pm	≤ 4 pm
Baseline drift	≤ 0.12 nm/hour	≤ 0.12 nm/hour	≤ 0.1 nm/hour	≤ 0.1 nm/hour	≤ 0.1 nm/hour
Acquisition rate	2, 5, and 10 Hz	2, 5, and 10 Hz	2, 5, and 10 Hz	2, 5, and 10 Hz	2, 5, and 10 Hz
Specifications					
Spectrometers	4	8	8	16	32
Sample microplate*	96-well format[1]	96-well format[1,2]	96 or 384-well format[1,2,3,4]	2 x 96 or 384-well format[1,2,3,4]	3 x 96 or 384-well format[1,2,3,4]
Evaporation control	No	No	No	Yes	No
Sample temperature control	Ambient plus 4°C to 40°C	Ambient plus 4°C to 40°C	Ambient plus 4°C to 40°C	15°C to 40°C	Ambient plus 4°C to 40°C
Automation compatible	No	No	No	Yes	Yes
Minimum sample volume	180 µL[1]	130 µL[2]	40 µL[4]	40 µL[4]	40 µL[4]
Smart monitoring	No	No	No	Yes	Yes
Self-cleaning	No	No	No	Yes	Yes
Dimension - HxWxD (cm)	49 x 68 x 33	47 x 67 x 31	68 x 73 x 44	92 x 87 x 79	84 x 114 x 77
Weight (kg)	31 kg	35 kg	55 kg	130 kg	220 kg

*Gator Bio offers [1] 96-well flat-bottom, [2] 96-well tilt-bottom, [3] 384-well flat-bottom and [4] 384 - well tilt-bottom microplates for range of BLI applications

Gator® Total Solutions

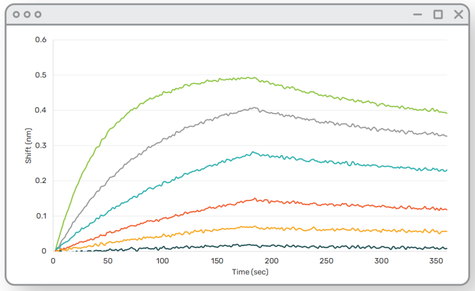
The Next-Gen Biolayer Interferometry

Biolayer Interferometry (BLI)

Gator® systems are label-free analysis instruments based on next-gen biolayer interferometry (BLI) technology. BLI detects biomolecular interactions by immersing biosensing probes in samples.

Gator® probes are micro glass rods with the distal ends coated with proprietary optical layers and surface chemistries.

The association or disassociation of biomolecules causes a phase-shift of the optical interference pattern generated from a probe's sensing surface. Continuous measurements of the phase-shift yield binding curves.



The sensorgram shows the real-time association and disassociation curves for a binding kinetics experiment using a Gator® system.

The ease of use, versatility, flexibility, and throughput of Gator® systems have enabled many applications in therapeutic development, manufacturing, and life science research

A Powerful Tool for Discovery, Development, and Manufacturing

The next-gen BLI demonstrates higher sensitivity and more robust performance than the other commercial BLI products. It also supports wider range of applications, from drug discovery to therapeutics manufacturing.

Biotherapeutics

- Antibody titer measurements
- Kinetics analysis
- Epitope binning
- Process development
- Manufacturing QC
- Pharmacokinetics

Gene Therapy

- AAV quantitation & kinetics
- Receptor interaction
- Gene expression
- Neutralizing/ Total Antibody Detection

Drug Discovery & Development

- Protein - small molecule interaction
- Peptide binding analysis

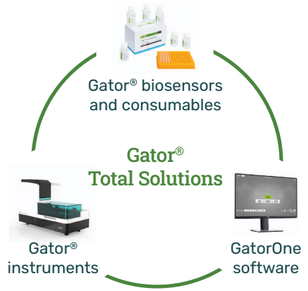
Life Science Research

- Protein - protein interaction
- Receptor - ligand binding
- Assay development and optimization

A User-Friendly Label-Free Technology

Gator® systems consist of instruments, probes, and integrated data acquisition and analysis software package.

- Simple and fast assay setup
- Automated quantitation
- Quantitation, kinetics, and regeneration in one run
- Kinetics and affinity analysis
- Real-time binding curves
- Epitope binning
- Assay template generation
- Report generation



Gator® Software for GMP and GLP

Gator® Part11 Software enables users in GMP or GLP environments to comply with FDA 21 CFR Part 11 regulations.

All data acquired with the Part11 Software is time-stamped and traceable. Features such as account management, enhanced audit trails, and recorded user sessions are in compliance with FDA guidance.

A Full Suite of Applications

Gator® Probes	Function	Applications	Dynamic Range	Regeneration
ProA	IgG titer	Q	0.02-2000 µg/mL	Yes
ProG	IgG titer	Q	0.02-2000 µg/mL	Yes
ProL	Kappa light chain titer	Q	0.02-2000 µg/mL	Yes
SA	Biotinylated and Avi-tagged molecules	K/EP	Protein dependent	No
SA XT	Biotinylated proteins and large molecules	K	Protein dependent	No
Flex SA	Reusable SA kit	K	Protein dependent	Yes
SMAP	Measurement of small molecules, peptides (<150 Da)	K	Protein dependent	No
HFC	Human IgG characterization	Q/K/QKR/EP	0.05-300 µg/mL	Yes
HFCII	Advanced human IgG characterization	Q/K/QKR/EP	0.3-6000 µg/mL	Yes
MFC	Mouse IgG characterization	Q/K/QKR/EP	0.02-6000 µg/mL	Yes
Anti-FAB	F(ab), F(ab)2	Q/K/QKR/EP	0.3-3000 µg/mL	Yes
APS	Direct adsorption	K	Protein dependent	No
AR	Amine coupling immobilization	K/EP	Protein dependent	No
His	His-tagged proteins	Q/K/QKR/EP	Protein dependent	Yes
Ni-NTA	His-tagged proteins through Ni-NTA	Q/K/QKR/EP	0.25-1000 µg/mL	Yes
Strep-Tactin XT	Proteins with Twin-Strep-tag®	Q/K	Protein dependent	Yes
Anti-PEG	PEGylated lipid-based molecules	Q/K	Analyte dependent	No
Anti-GST	GST-tagged proteins	Q/K	Protein dependent	No for Q
AAVX	Direct binding titer (AAV1-10)	Q/K	$1x10^9$-$1x10^{13}$ vp/mL	Yes
AAV9	Direct binding titer (AAV9)	Q/K	$3x10^9$-$1x10^{13}$ vp/mL	No
HS AAV	High sensitivity titer (AAV1-8, 10)	Q	$1x10^7$-$5x10^{10}$ vp/mL	No
HS AAV9	High sensitivity titer (AAV9)	Q	$1x10^7$-$1x10^9$ vp/mL	No
AAV Ratio	Empty vs Full Ratio Determination	Ratio	0-100% full	No