

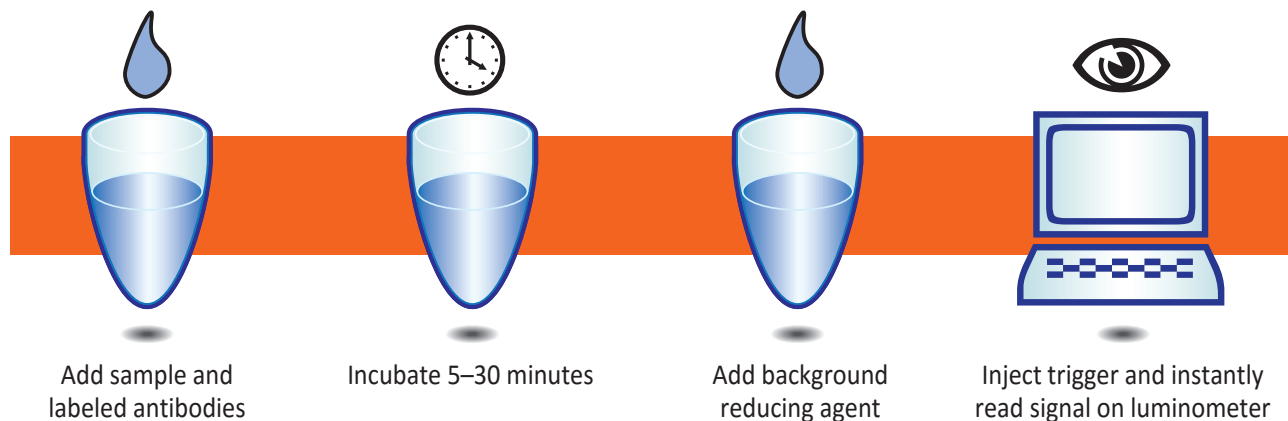
SPARCL™ for Antibody Screening

Efficient and Cost Effective Screening Technology for Therapeutic and Monoclonal Antibody Development Programs

Features & Benefits:

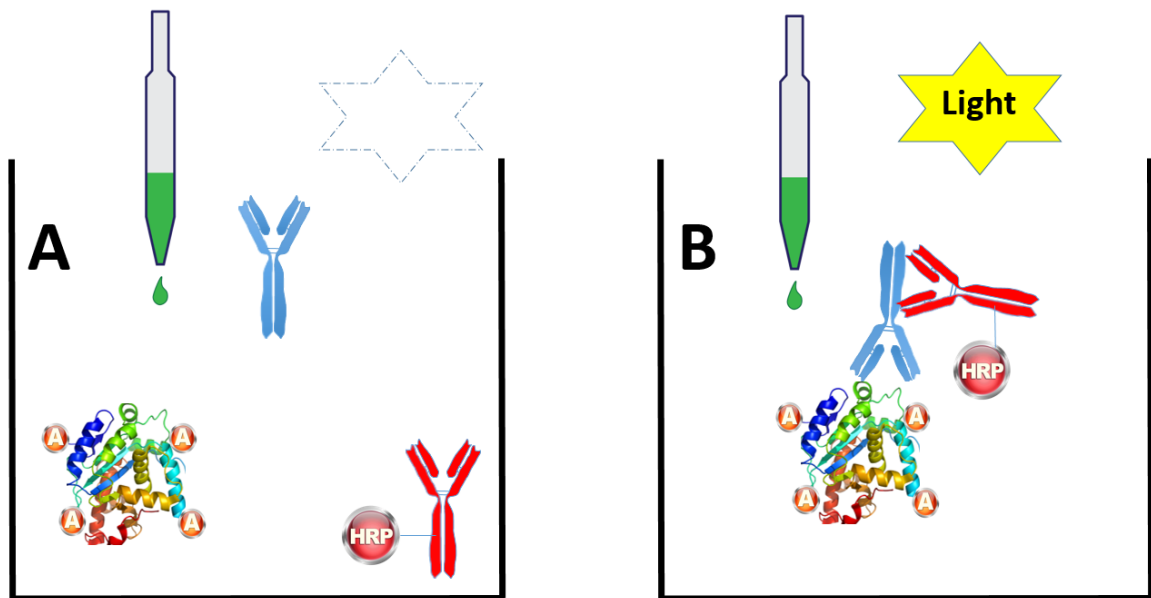
- Homogeneous format: No coating or blocking of ELISA plates
- No washing format: No plate washers needed, no washing steps
- A single 20 minute incubation step: Significant reduction of labor costs
- Flash Luminescence reporting: Rapid results, no waiting on color
- Flexible assay design: Rapid assay development
- High Throughput: Efficient and cost effective process
- Labeling with NHS chemistry: No clean up after labeling needed

4 Steps – 30 minutes – No solid support – No wash



What is SPARCL?

- SPARCL is a novel immunoassay chemistry that a homogeneous format (no wash steps)
- Key to the SPARCL technology is the interaction of acridan, HRP and hydrogen peroxide.
 - When acridan and HRP are in close proximity as a result of a specific binding event and the sample is exposed to hydrogen peroxide, the bonds on acridan are broken by free radicals generated from HRP and hydrogen peroxide and light is emitted.
 - The amount of emitted light is proportional to the amount of antibody binding to the immunogen.
- SPARCL runs in 96 or 384 well plates and the plates are evaluated on a luminometer.



- **Figure A** illustrates the addition of a trigger solution to the well in the circumstance where an immune complex has not formed. As a result, no light is emitted from the well.
- **Figure B** illustrates the addition of a trigger solution to a well where a specific immune complex has formed. The result is the emission of light that indicates an antibody recognizes the immunogen.

SPARCL: The Alternative to ELISA

Limitations to ELISA Technology:

- Historically, the colorimetric ELISA has been used for screening of cell culture supernatants to identify cells that secrete antibody against the immunogen.
- Protein immunogen adsorbed on plate is denatured, and is not representative of immunogen.
- ELISA is a 40 year old technology that is labor intensive, slow and cost and resource ineffective.

The SPARCL Advantage:

- SPARCL is an immunoassay technology that can be widely applied to a number of immunoassay formats.
- SPARCL provides a number of advantages over colorimetric ELISA:
 - SPARCL is flexible, easy to use and allows for rapid assay development and sample analysis. The format is automation friendly and allows for high throughput sample analysis.
 - SPARCL is a novel chemistry that allows for high throughput sample screening from both phage display and hybridoma supernatants.
 - SPARCL improves workflow, reduces labor, compresses screening timelines and allows for a more labor and cost effective screening process.
 - SPARCL allows for running more than 100 microtiter plates per day.

Why SPARCL™ For Antibody Screening?

- Monoclonal antibodies are widely used tools for applications that include ELISA , western blotting, immunoprecipitation, flow cytometry, pharmacokinetics, lateral flow assays and diagnostic assays.
- Developing a cell line for antibody production involves screening of the cell supernatants that produce antibody that specifically binds an immunogen.
- SPARCL offers a simple and resource conserving alternative to manual ELISA for the screening phases of monoclonal antibody development.
- SPARCL conserves labor and compresses time lines.
- SPARCL is homogeneous and does not require the use of coated plates.
- SPARCL does not have wash steps.
- SPARCL is plate-based and easily fits within automation for high sample throughput.
- Antigen is not denatured by adsorption onto plastic surface in a SPARCL format.

SPARCL Product Specifications

Enzyme	Horseradish Peroxidase (HRP)
Application	ELISA, Proximity Assays
Sensitivity	Low picogram
Signal Duration	Instantaneous Flash
Storage Conditions	2 - 8°C; Store in amber bottle to protect from light
Shelf Life	1 year
Working Solution	Ready to use solution

SPARCL Ordering Information

Description	Catalog Number
Lumigen SPARCL	SDK-10K

Please visit www.LUMIGEN.com

<http://www.lumigen.com/form/contact-us>

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