# 5 questions to consider before screening your library


## Screening compound and phage display libraries

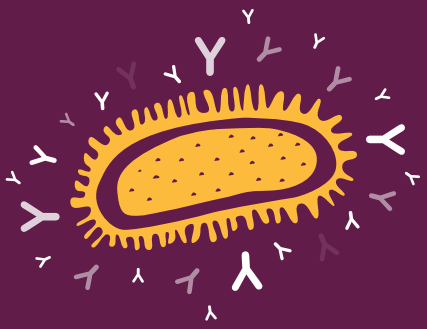
Library screening can be a daunting task. Between all the samples, keeping track of your cells, and the heaps of data, it's not unusual to get a bit overwhelmed. The good news is that screening can be straightforward and data friendly, but it takes a little forethought and planning. The following five questions can help prepare you for the realities of secondary screening, keeping you on track for meaningful data!

## What are your biological endpoints?

When defining your biological endpoints, you'll want to select a cut-off point for which there is ample supporting evidence that samples with higher values are "positive" and samples with lower values are "negative". These decisions should be based on evidence, both in your cells of choice and on your platform of choice. If you don't have this data at the ready, you're not ready to define your endpoints yet! Importantly, once you do define your endpoints, don't adjust them to echo your cells' responses. Be data driven, not swayed by your cells!

## Can your screens be multiplexed?

If you're interested in parameters that can be measured in the same cells at the same time – for instance, with two different antibodies – do you have the ability to assess both at the same time? If your platform can handle it, and the biology allows, you'd be increasing your throughput, improving your traceability, and consolidating your data. All of these are good ideas in the world of screening! Multiplexing, while beneficial from a time and data management standpoint, may require specialized equipment and software, so make sure that you're set up for success before making the leap.



## How traceable are your samples?

As mentioned in the previous point, the traceability of your data is increasingly important as your screens grow. Traceability basically boils down to whether or not you are able to confidently state what happened in the screen at any given moment. Were the cells incubated at the right temperature? How long were they exposed to light during their trip to or from the luminometer? When the cells were split to create a duplicate plate, how was the new plate coded? Having traceability is essential for the expansive screens conducted by pharma companies, but traceability is no less important in your smaller screens. Traceability can mean the difference between a full scale rescreen and a definitive, if unexpected, answer.

## Does your software allow you to access your reports (without IT's help)?

Screening is equal parts hardware and software. Once your screen is over, are you able to easily access your data? Or, as is the case with many screening packages, do you need to call IT for help extracting your data? Some software packages expect you to have a code-writing guru on call, just to be able to pull reports on your screens. Before you press start on your screen, make sure you have a plan for accessing and interpreting your data.

## Do you have a data management plan in place?

If you've been able to answer the above questions easily, you probably have a data management plan. If not, here's what one includes, and how it can help. A data management plan includes details on how much data you'll be generating with your screening campaign, where and how that data will be saved, how results can be traced back to your library, and – as mentioned above – who is needed to access the data. Having a data management plan in place before you start your screen can make all the difference when you sit down to analyze your data.

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