

Additional Resources

Tips for effective titles and
captions

All the data in a figure should support one clear message.

This could be through a single panel...

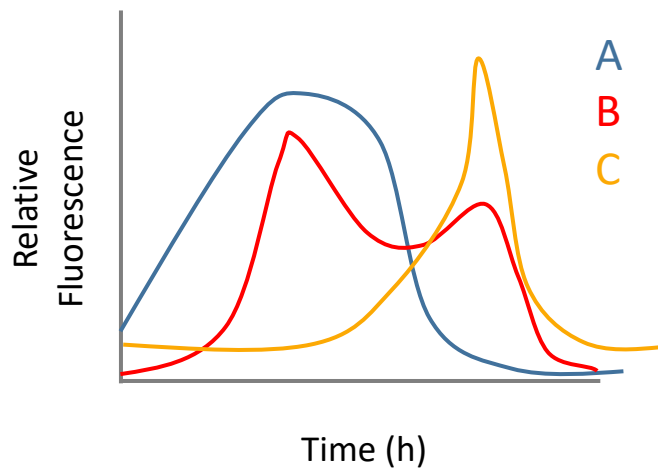


Fig. 1: A, B, and C have different dynamics under Condition X. A, B, and C were sampled using Method 1 and their fluorescence quantified with Method 2. Fluorescence data normalized to negative control.

...or multiple panels that contribute to the same takeaway message

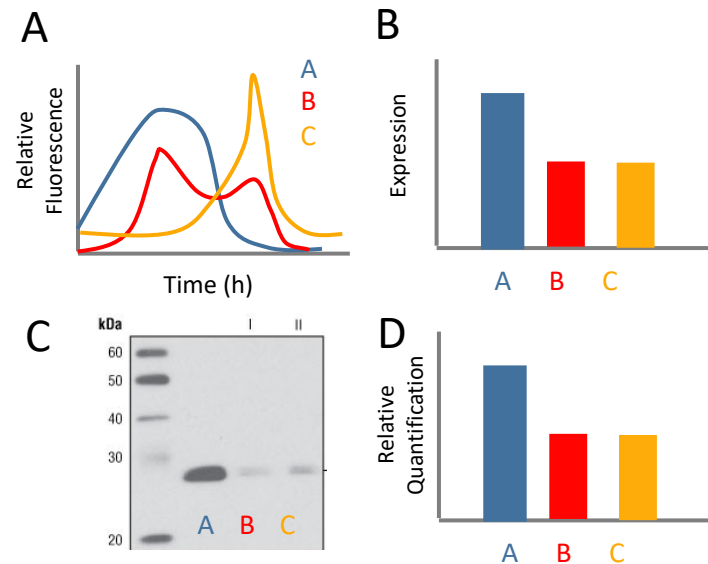


Fig. 1: A, B, and C have different dynamics under Condition X. A) A, B, and C were sampled using Method 1 and their fluorescence quantified with Method 2. Fluorescence data normalized to negative control. B) Gene expression data of samples A, B, and C, under condition X. Samples were collected at time T. C) Western blot analysis of samples A, B, and C, under condition X. D) Quantification of Western Blot.

All figures have these four elements

VISUAL

1. Choice of data

- Only data critical to the conclusion
- Honest data and controls

2. Presentation choices

- Type of graph or display, legends & labeling, design choices
- Uncluttered elements
- Allow quick evaluation of conclusions without relying on the legend or caption.

TEXT

Title

- Take-home **message**
- What conclusion should the **reader evaluate** when looking at the figure?

Caption

- **Descriptive**, not explanatory/interpretive
- Only enough method detail to make it clear how results were obtained.
- All types of figures should have captions

You should be able to read your figure titles and understand the main message of your paper

Fig. 1. Discovery of a putative Max binder.

Fig. 2. KI-MS2-001 and KI-MS2-008 Modulate Myc-Driven transcription in cells and inhibit viable cell levels in a Myc-dependent manner.

Fig. 3. KI-MS2-008 and analogs engage Max *in vitro* and in live cells

Fig. 4. KI-MS2-008 induces Max/Max homodimerization

Fig. 5. KI-MS2-008 decreases Myc protein levels and affects the global Myc transcriptional program

Fig. 6. KI-MS2-008 treatment decreases c-Myc protein binding and increases Max protein binding at promoters of Myc-occupied genes

Fig. 7. KI-MS2-008 exhibits efficacy in cellular and murine cancer models

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Fig. 1. **Discovery** of a putative Max binder.

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Fig. 6. KI-MS2-008 treatment **decreases** c-Myc protein binding and **increases** Max protein binding at promoters of Myc-occupied genes

Fig. 7. KI-MS2-008 **exhibits** efficacy in cellular and murine cancer models

*Highlighting
keywords / actions
can be helpful for
parsing storyline*

Build and simplify your title by identifying nouns and verbs and focusing on key terms

KEY NOUNS

KEY VERBS

Novel methods for early prediction of undesirable interference by microbial inhabitants of the human gut with metabolism of the cardiac drug digoxin give rise to strategies for alleviating drug inactivation

NEW AND IMPROVED TITLE

Predicting and alleviating drug interference by human gut microbiome

TOO SIMPLIFIED = LESS INFORMATIVE

Novel methods for prediction of drug interference

Remember your audience when condensing jargon to be concise

Surveying somatic mutations in P53, EGFR, BRCA1, and HRAS for impact on MCF7 tumors with heterogeneous cell composition.

1 2 3

Replace jargon to attract a broader audience



Surveying the impact of breast cancer oncogenes on tumor heterogeneity

1 2 3

Checklist for writing good titles

- Ensure that your title is a message
- Edit your title to highlight your key concepts
- Frame your titles for your audience
- Eliminate jargon

Captions provide minimal additional detail needed to understand the figure

Schematic Example 1 of 2

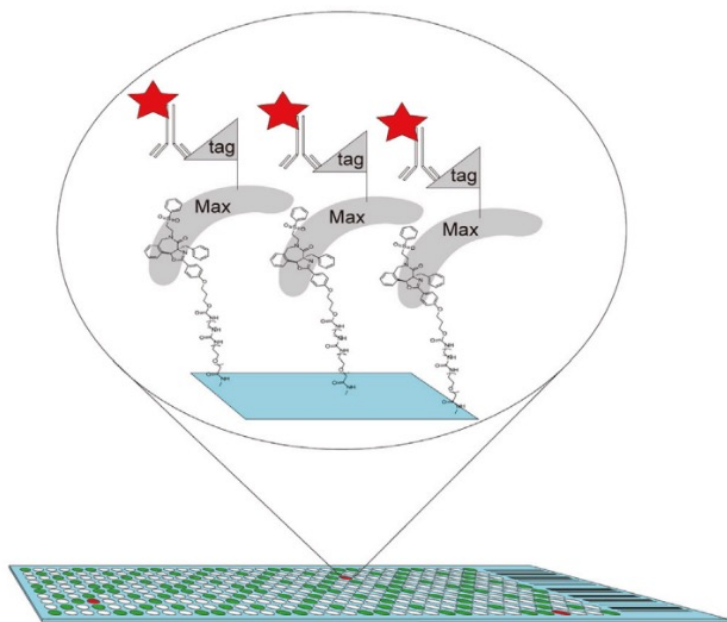


Figure 1. Discovery of a Putative Max Binder

(B) Schematic of a small molecule microarray (SMM) showing SMM positives (red spots), which were detected by Alexa Fluor 647-labeled antibodies against the His-tag on the purified Max protein.

Captions provide minimal additional detail needed to understand the figure

Schematic example 2 of 2

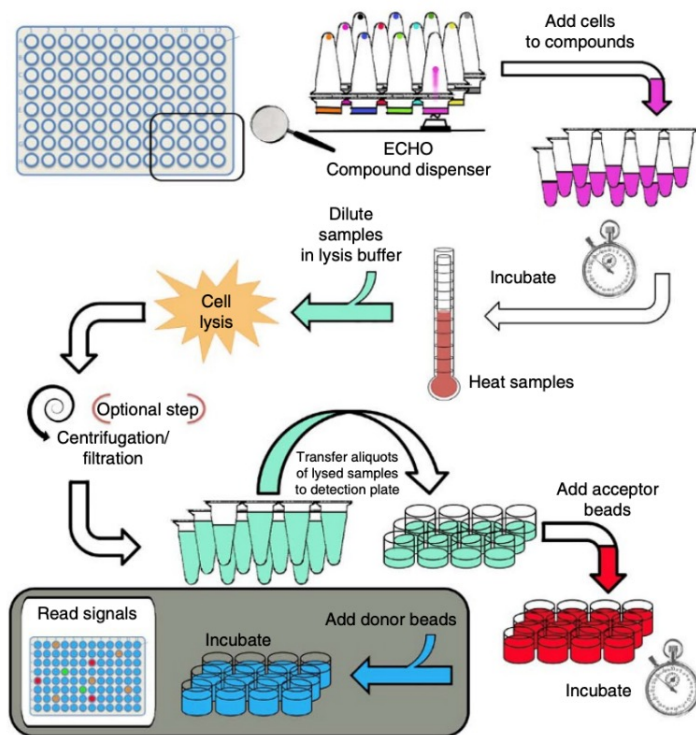


Figure 2 | The screen format assay procedure.

Compound stock solutions are first dispensed into individual wells followed by the addition of a cell suspension to all wells. The samples are next preincubated for 30 min before placing the microplates in a PCR machine for heating to a predefined temperature for 3 min. The plate is then allowed to cool before samples are diluted with lysis buffer. At this point, it is optional to remove the cell debris and protein aggregates by means of centrifugation and/or filtration. The diluted samples must then be transferred to a suitable detection plate (unless detection can be made in the same plate). Finally, the detection is achieved by following a standard protocol for AlphaScreen bead additions, incubations and readings.

sometimes it can be appropriate to focus on methods in caption if the point of a schematic figure is to convey a novel method!