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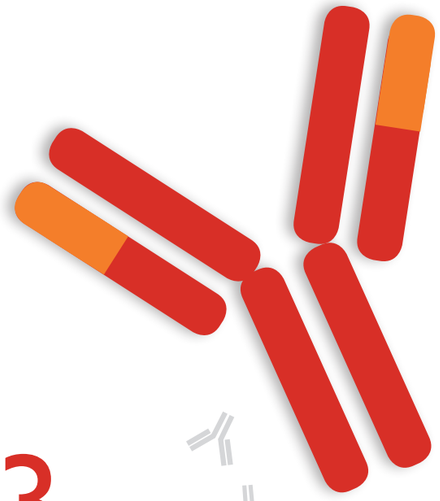
Making the most of your **antibodies**

Antibodies are an essential part of many modern biology labs. Used correctly, they are a powerful tool ... but they need to be treated with care and respect.

Here are some tips for getting the most out of your precious antibody reagents.



1

SETUP

- confirm that your antibody has been **validated** for the intended application
- **titrate** your antibody to determine the optimal working conditions and concentrations
- **carefully store** your reagents according to manufacturers' recommendations
- limit **excessive handling** by aliquoting antibody reagents.

2

DESIGNING THE EXPERIMENT

- do all **dilution calculations** in advance (and double-check them)
- carefully select **controls** (e.g., positive, negative, and nonspecific binding)
- prepare and review your **protocol** sheet
- **set up and label** all tubes and plates in advance.

3

DOING THE EXPERIMENT

- **follow your protocol** carefully, checking off each step as it's done
- **handle antibody reagents with care**—don't overmix or leave at room temperature
- **pipet reagents** carefully and accurately.

4

TROUBLESHOOTING

If things didn't turn out as expected:

- carefully **check** all calculations and dilutions
- **check your protocol** against manufacturers' recommendations
- do your **controls** help you identify the source of the problem?
- confirm **compatibility** of your primary antibody with secondary antibody and other reagents
- are all of your reagents **fresh** (especially blocking agents)?
- were the proper **incubation times** used?

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Verification of **antibody performance**

Researchers need antibodies that bind to the right target and work in their applications every time. To help ensure superior antibody results, Thermo Fisher Scientific has expanded their specificity and validation* testing methodologies using a 2-part approach for advanced verification.

The challenge

Antibodies are some of the most critical research reagents used in the lab. Poor specificity or application performance can lead to inconsistent results, a lack of reproducibility, and a waste of time and money.

Invitrogen™ antibodies are currently undergoing a rigorous 2-part testing approach

TARGET SPECIFICITY VERIFICATION

Helps ensure the antibody will bind to the correct target. Invitrogen antibodies are being tested using at least one of the following methods:

- Immunoprecipitation/mass spectrometry
- Knockout
- Knockdown
- Independent antibody verification
- Cell treatment
- Relative expression
- Neutralization
- Peptide array
- Orthogonal

2

FUNCTIONAL APPLICATION VALIDATION

These tests help ensure the antibody works in particular applications of interest, which may include (but are not limited to):

- Western blotting
- Immunofluorescence imaging
- Flow cytometry
- Chromatin immunoprecipitation
- Immunohistochemistry

The solution

Thermo Fisher Scientific is working to redefine antibody performance with a comprehensive approach to how antibodies are evaluated and validated. By combining specificity testing with extensive application validation data, Thermo Fisher helps ensure that Invitrogen antibodies will help enable superior performance for researchers.

*The use or any variation of the word "validation" refers only to research use antibodies that were subject to functional testing to confirm that the antibody can be used with the research techniques indicated. It does not ensure that the product(s) was validated for clinical or diagnostic uses.

For Research Use Only. Not for use in diagnostic procedures.

Find out more at:
thermofisher.com/antibodyvalidation

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