

ELISA

Data you can trust

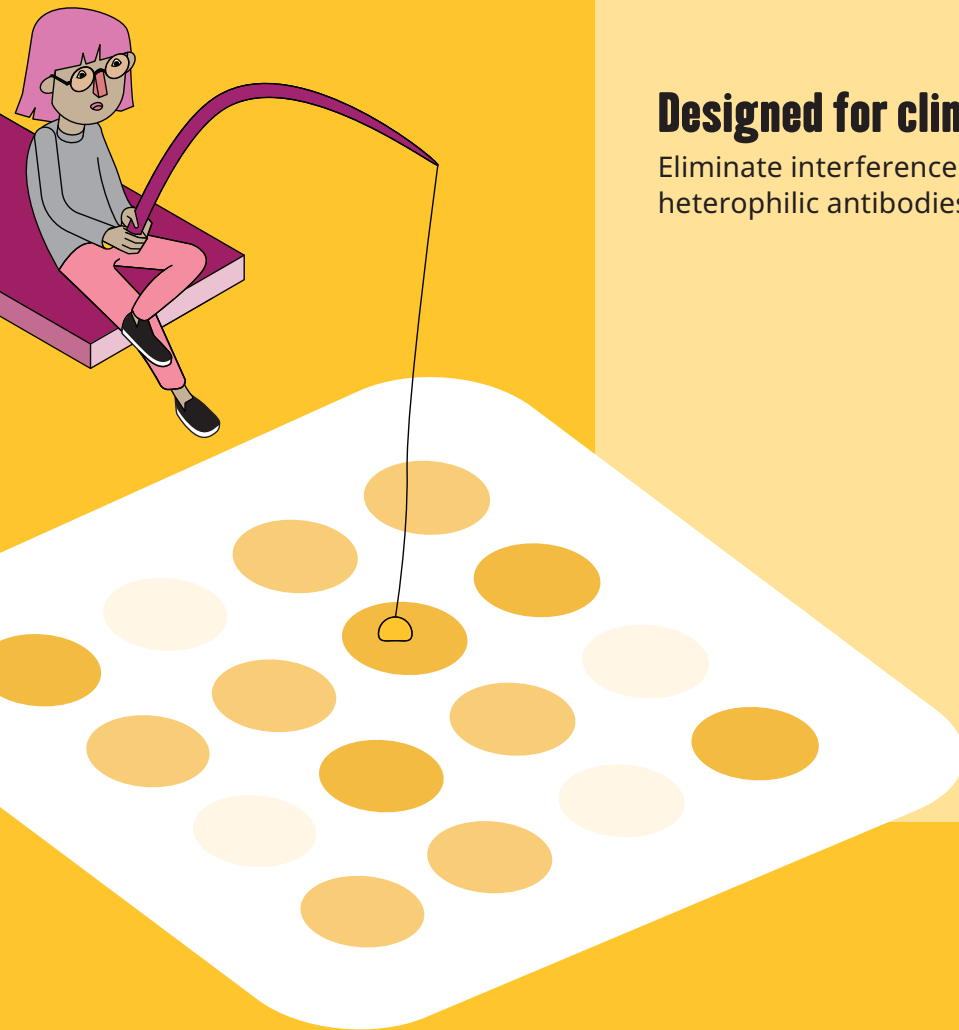
Our monoclonal antibody pairs are always selected for reactivity with native proteins

Little effort, big results

Ideal screening tool: easy to set up and scalable

Designed for clinical samples

Eliminate interference from rheumatoid factor and heterophilic antibodies with ELISA PathRF kits



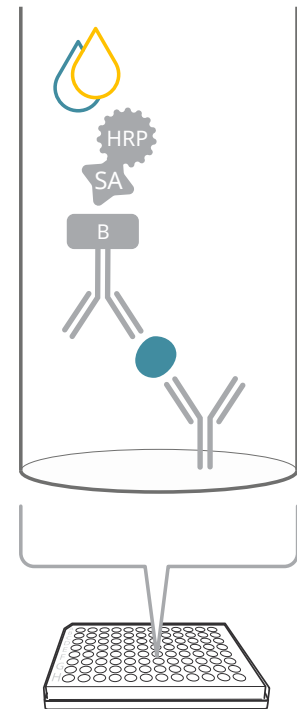
MABTECH

How does ELISA work?

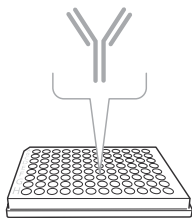
ELISA assays are used to measure cytokines, chemokines, immunoglobulins, hormones, and other **biomarkers in solutions**. Common sample types include cell supernatants, plasma, serum, and other bodily fluids.

In our sandwich ELISAs, an antibody is coated onto the plate to capture the protein of interest in the added sample. A second antibody is then used to detect the captured protein. This detection antibody is labeled with biotin, facilitating subsequent binding of a streptavidin-enzyme conjugate.

The addition of the substrate results in a colorimetric reaction that is directly proportional to the amount of bound protein. The protein **concentration** in the sample is then determined by comparison with a standard curve of known protein concentrations.

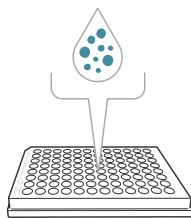


Step-by-step



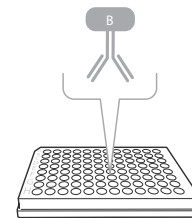
1. Coating

The capture antibody is added to a plate with high protein-binding capacity.



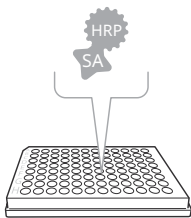
2. Protein capture

Samples are incubated allowing the soluble protein to be captured by the antibody.



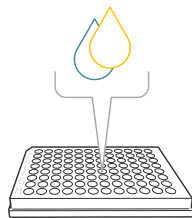
3. Detection antibody

The biotinylated detection antibody is added to bind the captured protein.



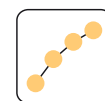
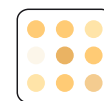
4. Secondary detection

The addition of a streptavidin-enzyme conjugate enables enzymatic detection.



5. Substrate addition

A colored solution is formed by the enzyme once its substrate is added. The color intensity is proportional to the protein concentration.



6. Analysis and calculation

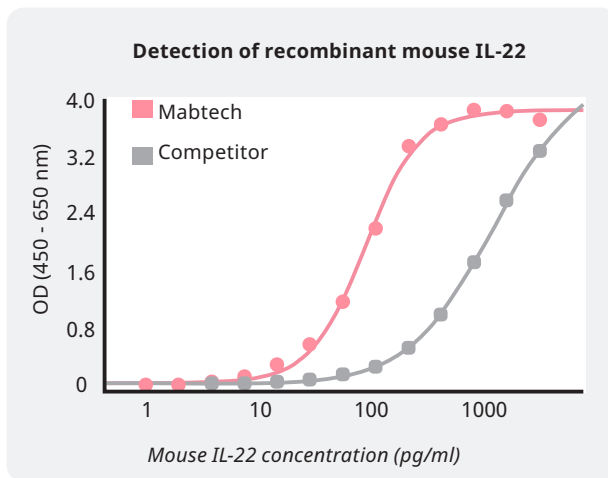
The absorbance is measured in an ELISA reader, and the protein concentration is quantified using a standard curve.

What makes Mabtech's ELISA special?

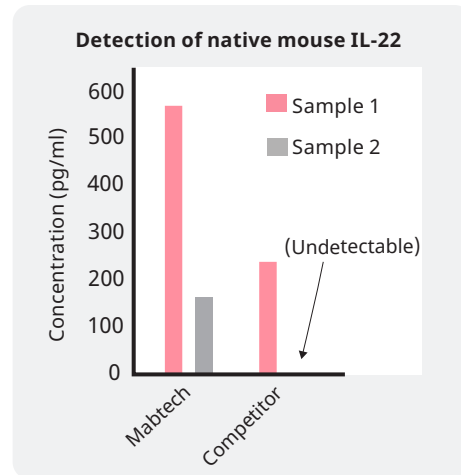
Detect the native protein

An ELISA is only as good as the antibodies that capture and detect the analyte of interest. Antibody features such as affinity, avidity, and antigen interaction are essential for a successful assay. At Mabtech, we put considerable effort into characterizing these antibodies, and we

always validate the ELISAs for recognition of **native proteins** as this often differs from how the antibodies bind to recombinant proteins. The use of monoclonal antibodies makes our ELISAs **specific and sensitive**.



Detection of serially diluted *E. coli*-derived recombinant mouse IL-22 using kits from different suppliers.



Mouse splenocytes stimulated with PMA/ionomycin. Two samples of cell culture supernatants.

Prevent false-positive results

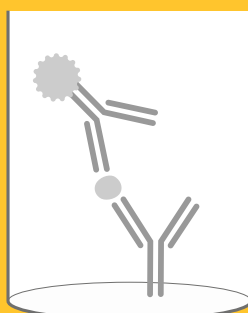
Our ELISA PathRF kits are designed to eliminate false-positive signals caused by **rheumatoid factor** and **heterophilic antibodies**.

Heterophilic antibodies, such as human anti-animal immunoglobulin antibodies (HAIA) and human anti-mouse antibodies (HAMA), bind to other antibodies. In a sandwich ELISA, such antibodies can cross-link the assay antibodies,

leading to false-positive signals and biased results.

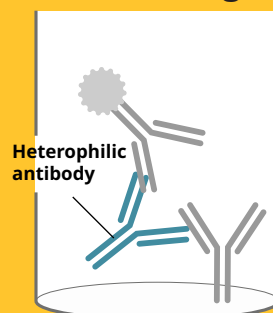
This interference is a recurring issue when analyzing **clinical samples** that contain rheumatoid factor, typically found in patients with autoimmune diseases. Our ELISA PathRF kits address this problem to ensure accurate results.

Sandwich ELISA



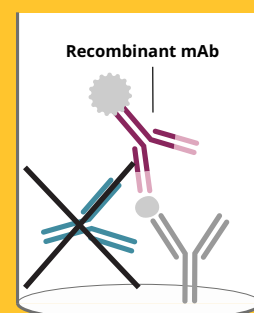
How it should be.

Cross-linking



Oh no! **No** analyte but a positive result.

ELISA PathRF kit



Phew! Cross-linking prevented.

How is it used?

Cytokines

Cytokines are typically present in low quantities. Therefore, a highly sensitive assay, like our ELISAs, are required.

Cytokines are the signaling molecules of the immune system. Analyzing their secretion patterns helps understanding immune responses.

Popular products

ELISA Pro: Human IFN- γ

ELISA Pro: Mouse IFN- γ

ELISA Pro: Human IFN- α

ELISA Pro: Human IL-6

ELISA Pro: Human Granzyme B

Immunoglobulins

Quantifying immunoglobulins in solution is a common task performed using ELISA. Our Ig ELISA Flex kits enable you to analyze both total and antigen-specific antibody responses.

Monitoring antibody levels is essential for characterizing immune responses to infections or vaccines. Additionally, these kits can be used for studying allergy and autoimmune diseases.

Popular products

ELISA Flex: Human IgG (ALP)

ELISA Flex: Human IgE (HRP)

ELISA Flex: Human IgA (ALP)

ELISA Flex: Human IgM (ALP)

ELISA Flex: Mouse IgG (HRP)

Apolipoprotein

Apolipoproteins are key proteins in lipoprotein particles that help transport and metabolize lipids. They are biomarkers for cardiovascular and neurodegenerative diseases.

Popular products

ELISA Pro: Human apoE

ELISA Pro: Human apoB

ELISA Pro: Human apoA1

ELISA Pro: Mouse apoE

ELISA Pro: Human apoH

Which kit format to choose?

Choose from our different ELISA kit formats: adaptable **ELISA Flex** kits, straight-forward **ELISA Pro** kits (with everything included to ensure a reproducible assay), and specialized **ELISA PathRF** kits for clinical samples.



	ELISA Flex <i>Adaptable</i>	Recommended ELISA Pro <i>Reproducible</i>	ELISA PathRF <i>RF-blocking</i>
ELISA plate	-	Pre-coated	Pre-coated
Capture mAb	✓	Coated on plate	Coated on plate
Detection mAb, biotinylated	✓	✓	Recombinant
Detection mAb ALP/HRP	✓*	-	-
ELISA standard	✓	✓	✓
Streptavin-ALP/HRP	✓	✓	✓
TMB substrate and stop solution	-	✓	✓
Buffers	-	ELISA diluent/ Assay buffer/ Apo buffer	RF-block diluent
Performance data	-	✓	✓
Size	Reagents for 6 and 20 plates	1, 2, and 10 plates	1 plate

*Included for certain immunoglobulin analytes

Our ELISA kits have been awarded



Check out all of our kits

We have kits for numerous analytes in a number of different species, and we're regularly expanding our range of products. Please visit www.mabtech.com or scan the QR to see all of our products.



Selected references

Our ELISA kits appear in numerous publications ranging from vaccine development to cancer and allergy research. Scan the QR code for a full list of references.

Asrat et al., *Chronic allergen exposure drives accumulation of long-lived IgE plasma cells in the bone marrow, giving rise to serological memory*, *Sci Immunol* 2020

Cirac et al., *Epstein-Barr virus strain heterogeneity impairs human T-cell immunity*, *Cancer Immunol Immunother* 2018

Gu et al., *Myeloid cell nuclear differentiation antigen controls the pathogen-stimulated type I interferon cascade in human monocytes by transcriptional regulation of IRF7*, *Nat Commun* 2022

Papakyriacou et al., *Loss of NEDD8 in cancer cells causes vulnerability to immune checkpoint blockade in triple-negative breast cancer*, *Nat Commun* 2024

De Vries et al., *$\gamma\delta$ T cells are effectors of immunotherapy in cancers with HLA class I defects*, *Nature* 2023

Lazo et al., *A recombinant SARS-CoV-2 receptor-binding domain expressed in an engineered fungal strain of *Thermoascus heterothallica* induces a functional immune response in mice*, *Vaccine* 2022

Casales et al., *Idiotype vaccines produced with a non-cytopathic alphavirus self-amplifying RNA vector induce antitumor responses in a murine model of B-cell lymphoma*, *Sci Rep* 2021



MABTECH

About Mabtech

Mabtech is a Swedish biotech company founded in 1986. Our mission is to aid scientists to reach new frontiers through optimal immunoassays and instruments.

www.mabtech.com