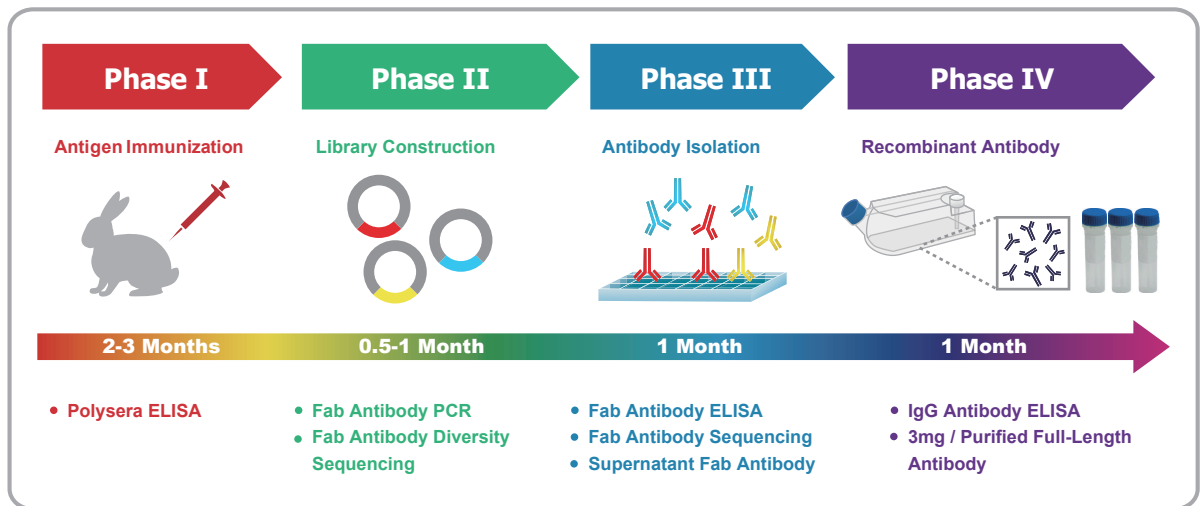# Rabbit Monoclonal Antibody

Abnova recognizes the importance of rabbit monoclonal antibody for research, development and commercialization. Technology accessibility, intellectual property, and higher cost have long hampered the widespread adoption and application of rabbit monoclonal antibody. Unlocking this barrier is critical to success of proteomics and biotech industry where traditional antibody tools such as mouse monoclonal antibody and rabbit polyclonal antibody encounter their limitations.

Abnova Rabbit Monoclonal (ARM) technology is an integrated and high throughput platform for the generation of rabbit monoclonal antibody. This service is available to everyone in the research and *in vitro* diagnostic community. A wide variety of antigens can be used for rabbit immunization. Rabbit possesses a broader yet non-tolerant immunologic repertoire for antibody development. A non-fusion library is created to screen for antibody clone of highest affinity and exquisite specificity. The clone is introduced into a proprietary expression vector for transient and scalable antibody production for many downstream applications. Customers can access the rabbit serum for pre-testing, antibody sequencing for antibody engineering, and purified antibody for application of interest.

Phase I	Phase II	Phase III	Phase IV
Antigen Immunization	Library Construction	Antibody Isolation	Recombinant Antibody
2-3 Months	0.5-1 Month	1 Month	1 Month
• Polysera ELISA	• Fab Antibody PCR • Fab Antibody Diversity Sequencing	• Fab Antibody ELISA • Fab Antibody Sequencing • Supernatant Fab Antibody	• IgG Antibody ELISA • 3mg / Purified Full-Length Antibody

ARM vs. Conventional Rabbit Mab

	Abnova Rabbit Mab (ARM)	Conventional Rabbit Mab
Technology	Non-Fusion Fab Antibody Library	Rabbit Myeloma
Antibody Repertoire	Broad (no fusion needed)	Narrow (<1% fusion rate)
Screening Throughput	High	Low
Epitope Coverage	High	Low
Antibody Success Rate	Higher	Lower
Antibody Yield	High	Low
Clone Stability	Excellent	Poor
Antibody Engineering	Readily Applicable	Troublesome

In the United States:
For customer service, call 1-800-766-7000
To fax an order, use 1-800-926-1166
To order online: www.fishersci.com

In Canada:
For customer service, call 1-800-234-7437
To fax an order, use 1-800-463-2996
To order online: www.fishersci.ca

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Rabbit vs. Mouse Mab

|	Rabbit	Mouse
Immune Tolerance	None	Yes
Antibody Diversity	Broad	Narrow
Antigenicity	Strong reaction to small molecules, peptides, & proteins.	Weak reaction to small molecules and peptides.
Affinity	Picomolar	Nanomolar
Specificity	High	Moderate
Isotype	IgG	IgG1, IgG2a, IgG2b, IgG3
Applications	Especially suited for IHC, IP, FC, antibody pair & kit.	Mostly suited for WB, ELISA, IF, antibody pair & kit.
Antibody Engineering	Yes	Yes

Advantages

- High Affinity Antibody
- Diverse Antibody Repertoire
- No Immunologic Tolerance
- Scalable Antibody Production
- More Stable Antibody Clone
- Antibody Engineering

Applications

- High Affinity Antibody
- Rabbit Monoclonal Antibody
- Modification-State Antibody
- Anti-Idiotype Antibody
- Antibody Pairing and ELISA Kit
- Research and In Vitro Diagnostic

Demonstrations

Comparison of Anti-TSH Rabbit Mab With a Commercial Antibody
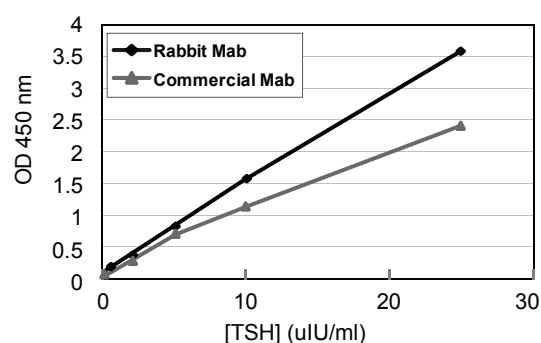
TSH Dose Response Curves

Comparison of isolated rabbit Mab for TSH (thyroid stimulating hormone) with a commercial antibody diagnostic kit on detection of TSH in a sandwich ELISA setting. The rabbit Mab shows a superior binding activity to TSH compared side-by-side to the commercial antibody.

Validation of Isolated Anti-Collagen Rabbit Mab by Sandwich ELISA
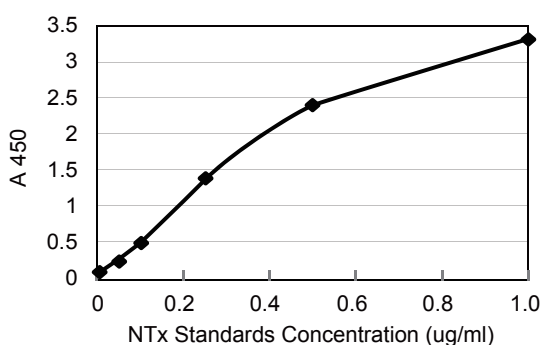
NTx Standard Curve

A rabbit Mab was used to capture a collagen peptide (NTx) with serial dilutions (0, 0.05, 0.10, 0.25, 0.50 and 1.00 ug/ml) in physiologic relevant concentration range in a sandwich ELISA setting.