

NEWS on diagnostics

Special Edition – Antibody Capabilities



Welcome to our Special Edition of News on Diagnostics. This volume will focus on our antibody capabilities. Providing highly cited primary and secondary antibodies, we have you covered for your ELISA, western blot, immunohistochemistry and other immunoassay needs. Our Antibody Explorer search tool (SigmaAldrich.com/antibodyexplorer) helps you find and compare our many trusted brands of research and diagnostic antibodies and narrow your results by application, species reactivity, host and other parameters.

Antibodies

More than 700 diagnostic antibodies & related products

- Primary Antibodies
- Secondary Antibodies
- Antibody Controls
- Blockers
- Animal Serums
- Over 10,000 peer reviewed citations per year
- Primary manufacturer with multiple sites offering flexibility and customization

Our comprehensive portfolios of monoclonal and polyclonal primary antibodies are focused on cell and molecular targets in neurobiology, cancer, cardiology, and immunology. Secondary antibodies targeting multiple host IgGs are conjugated to alkaline phosphatase, peroxidase, biotin, FITC and other labels.

A note on antibody reproducibility

While vendors are responsible for reagent quality, researchers also share responsibility, as personal incentives for reproducible research are high. Taking

Explore Recombinant, Polyclonal & Monoclonal Antibodies

Enter Antigen / Antibody Name...

Search Within	Refine Search (Optional)	
<input checked="" type="radio"/> All Antibodies	Application <input type="text"/>	Conjugate <input type="text"/>
<input type="radio"/> Primary Antibodies Only	Clonality <input type="text"/>	Host Species <input type="text"/>
<input type="radio"/> Secondary Antibodies Only	Species Reactivity <input type="text"/>	Antibody Form <input type="text"/>
<input type="radio"/> Recombinant Monoclonal Antibodies Only	<input type="button" value="SEARCH"/>	
<input type="radio"/> Cell Marque IVD Use Antibodies Only		

several small steps can reduce the risk researchers unknowingly have when running an experiment. Some of these steps are simply asking smart questions before purchasing products or recording product information as reagent boxes are opened. Other steps fit into toolboxes of validation strategies to ensure critical reagents match experimental requirements for identity, function and structure.

Visit SigmaAldrich.com/antibodies for more information, or download our detailed white paper on Improving Reproducibility: Best Practices for Antibodies at SigmaAldrich.com/antibody-reproducibility

How to Choose a Secondary Antibody

Your secondary antibody performance is as critical as that of your primary. There are a number of key questions you need to consider about antibody structure, isotype, purification, label, etc. before

choosing the best secondary. Visit our technical document page for help and support on choosing secondary antibodies.

[SigmaAldrich.com/secondary-antibody-selection](https://www.sigmaaldrich.com/secondary-antibody-selection)

Cardiac antibodies

Cardiovascular diseases (CVDs) are the number one cause of death globally. Cardiac biomarkers are protein-based substances which can be used as indicators of the biological state for diagnosis and prognosis of cardiovascular diseases. The growing application of cardiac biomarkers for point-of-care (POC) testing facilitates quick results in emergent situations and allows physicians to make critical decisions on treatment. As a leader in providing diagnostic antibodies and other reagents to IVD scientists, we have assembled a panel of characterised antibody pairs against the most important clinical cardiac biomarkers.

For more information, visit [SigmaAldrich.com/cardiacantibodies](https://www.sigmaaldrich.com/cardiacantibodies)

Features

- Validated Pairs
- Excellent Linearity
- Quality
- Lot-to-lot Consistency
- Bulk Availability

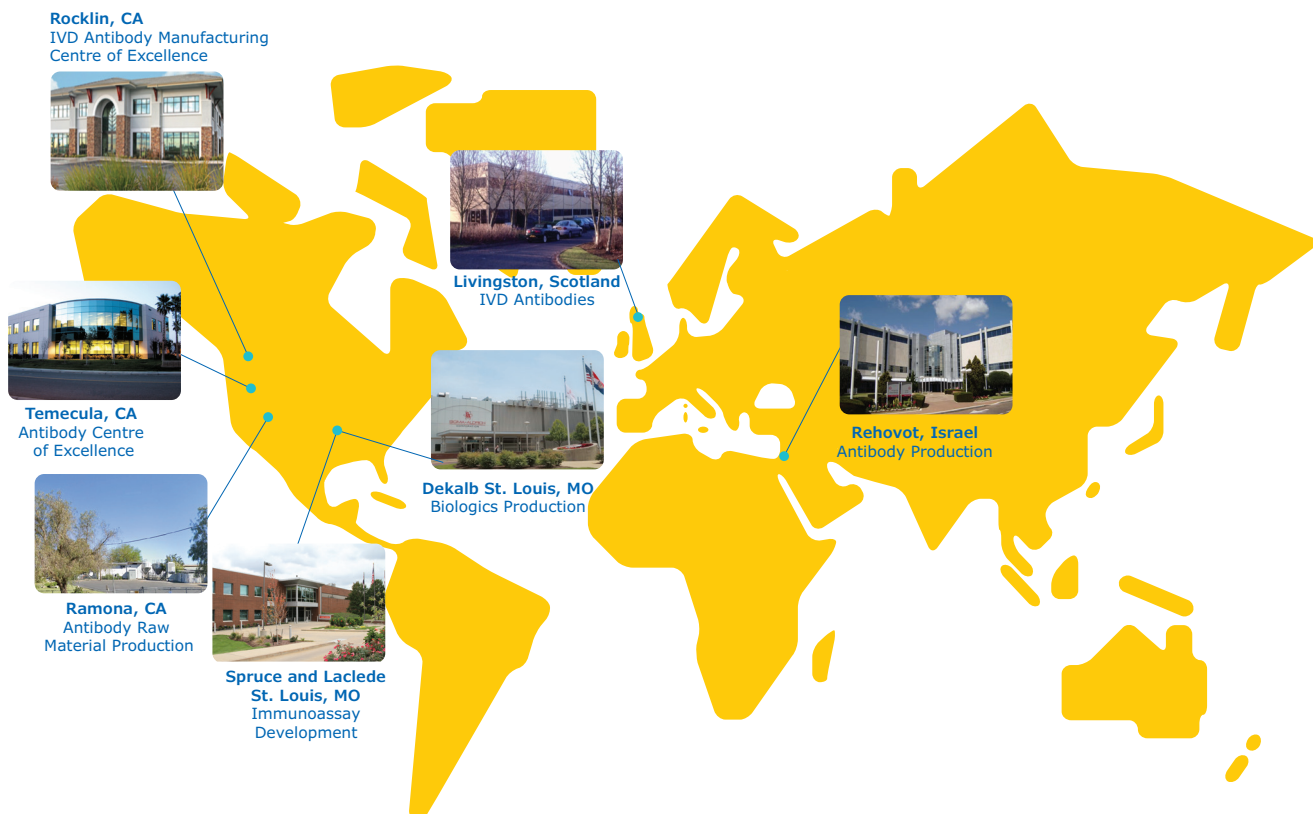
Benefits

- High Sensitivity
- High Specificity
- Validated Pairing Data (ELISA)
- Kinetic Binding Data

Key Global Antibody Production sites

We are a pioneer and leader in antibody technologies, from engineered antibodies to multiplexed immunoassays for research and diagnostic applications. The map below shows the centers

of excellence that have significant input into our antibody offering, whether through research, direct production or further modification or purification of raw materials.



Antibody capabilities by manufacturing site

The table below gives some further information about the capabilities of our antibody production sites. We have six sites (and seven facilities) that are involved in antibodies, with a variety of expertise including purification, conjugation, as well as bulk manufacturing capabilities.

Site	Expertise	Capacity	Quality certification	Additional capabilities
St Louis, MO, USA (combines Spruce & Laclede, and Dekalb)	<ul style="list-style-type: none"> Protein and antibody purification and conjugation 	<ul style="list-style-type: none"> >6,000 products released and packaged Large scale liquid batching (Up to 33,000 Litre batch size) Dry powder blending and grinding (up to 200 kg) Up to 250 Litre single batch lyophilisation capacity 	<ul style="list-style-type: none"> ISO 9001:2008 ISO 13485:2003 USDA Registration For Animal Derived Products 21 CFR 820 compliant 	<ul style="list-style-type: none"> Automated liquid fill lines (mL-4L) Aseptic low endotoxin processing Custom manufacturing, packaging, and kit design Multi-disciplined and scale capabilities Depth of experience and expertise (50+ years) Flexibility and adaptability
Rocklin, CA, USA	<ul style="list-style-type: none"> One of the largest IVD IHC primary antibody portfolios in the industry Production & marketing of antibodies and reagents for diagnostic IHC Pathologists on staff 	<ul style="list-style-type: none"> ~30,000 sq. ft. facility More than 70,000 tissue samples banked Primary polyclonal, monoclonal, and recombinant antibody development/purification Validation on all market leading automated staining equipment 	<ul style="list-style-type: none"> ISO 13485:2003 21 CFR Part 820 Compliant Regulatory & Quality Assurance 	<ul style="list-style-type: none"> Contract development and manufacturing for IVD and for companion diagnostic Detection systems & chromogens Positive control slides IHC diluents, buffers & pre-treatments
Livingston, Scotland, UK	<ul style="list-style-type: none"> One of the largest Blood Typing antibody portfolios in the industry GMP production & marketing of antibodies and reagents for blood typing, infectious disease and other diagnostic applications CMO Site for regulated proteins and reagents 	<ul style="list-style-type: none"> ~3,000 m² facility Large scale bio-manufacturing plant with >130,000 L p.a. fermentation capacity, in batch and continuous systems 1000 L liquid handling and ISO 7 to 5 multiproduct clean room 3-5 million vials p.a. capability Monoclonal, and recombinant antibody transfer/production/purification GMP cell bank preparation and validation 	<ul style="list-style-type: none"> ISO 13485:2012 ISO 9001:2008 ISO 14001 21 CFR Part 600 and 820 Compliant Compliance with European Directive for In Vitro Diagnostics 98/79/ EC 	<ul style="list-style-type: none"> Contract development and manufacturing for IVD and for companion diagnostic Detection systems & chromogens Positive control slides IHC diluents, buffers & pre-treatments
Temecula, CA, USA	<ul style="list-style-type: none"> Development of novel monoclonal cell lines Conjugation Bulk monoclonal & polyclonal antibody manufacturing Diagnostic kits manufacturing and recombinant protein production 	<ul style="list-style-type: none"> Centre of excellence for biologics Approximately 350 employees Size: 155,000 sq. ft. of facilities (3) on 9.6 acres Nearly 2,000 new finished good products launched every year 	<ul style="list-style-type: none"> US FDA Registration 21CFR820 USDA Class R Compliant ISO 9001 (Quality Management System) ISO 13485 (Medical Devices) ISO 14001 (Environmental Management System) 	<ul style="list-style-type: none"> Business expertise in: licensing, new product introductions, regulatory and export controls Global distribution including cold chain distribution – refrigerated, frozen up to -80 °C and liquid nitrogen

Site	Expertise	Capacity	Quality certification	Additional capabilities
Ramona, CA, USA	<ul style="list-style-type: none"> Production of monoclonal and polyclonal antibodies – serum, ascites, purified formats Antiserum production for monoclonal and polyclonal antibodies Antibody purification 	<ul style="list-style-type: none"> Facility size: 8,608 ft² / 800 m² laboratory facility and 12,697 ft² / 1,180 m² animal housing on 9.4 acres Number of Employees: 14 Multi-species animal facilities 	<ul style="list-style-type: none"> ISO 9001:2008 ISO 13485:2003 USDA Class B and Class R USDA/NCIE Technical Blood and intermediate approvals 	<ul style="list-style-type: none"> In-line QC Liquid fill for internal transfer of bulk materials
Rehovot, Israel	<ul style="list-style-type: none"> Multi-host species polyclonal and monoclonal antibody production Secondary antibody conjugation to fluorescent dyes, enzymes, or agarose Native serum Abs from human (IgM, IgA, IgG) Purification, conjugation, immobilization Hybridoma technology Production in bioreactors 	<ul style="list-style-type: none"> > 3000 Products Immunochemistry Centre of Excellence Unique production facility: Animal farm compliant with international regulations 	<ul style="list-style-type: none"> ISO 9001 ISO 13485 	<ul style="list-style-type: none"> Integrated research campus including R&D, Sales & Marketing, Tech Service and Distribution warehouse

COVID-19 RELATED ANTIBODIES

Supporting detection and serological monitoring

Learn More SigmaAldrich.com/antibodies-for-covid-19-research

