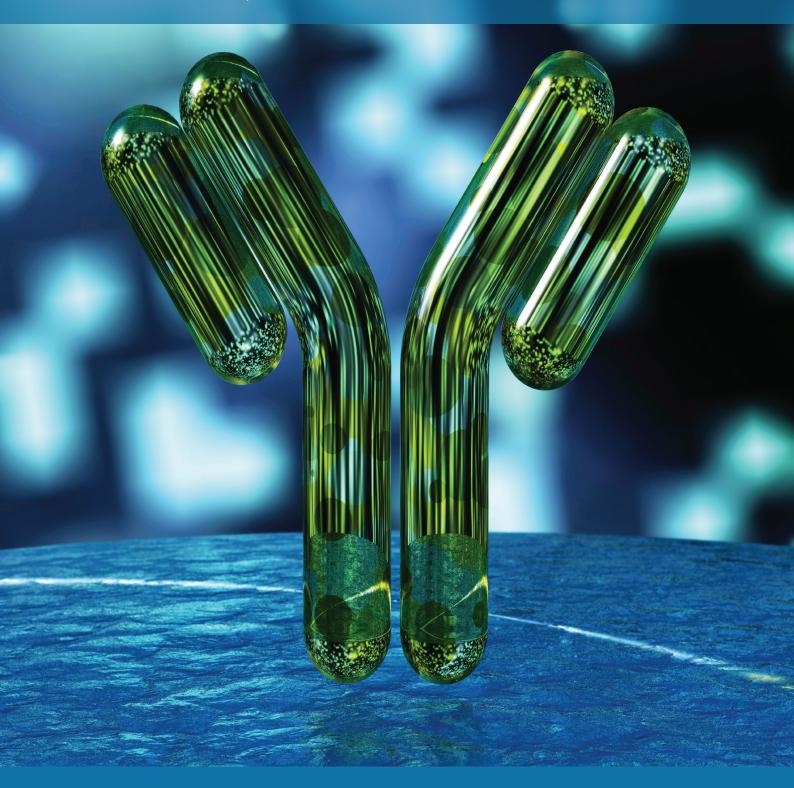


BIOZOL FIT FOR SCIENCE

BRINGING QUALITY & EFFICIENCY TO RESEARCH



SECONDARY ANTIBODIES



www.biozol.de



Your Partner for Secondary Antibodies

Biozol Diagnostica Vertrieb GmbH are proud to have been providing products and services within the life science arena since 1989. We always aspire to give our customers the fastest response times and high standards of customer service.

Secondary antibodies are versatile reagents, with uses including detection of unlabelled primary antibody, signal amplification of antigenic targets with low expression levels and ELISA measuring antibody levels in patient serum.

Most commonly used for detection and visualisation of unlabelled primary antibody bound to target antigen. Secondary antibodies are conjugated to reporter molecules; these labels can be fluorescent dyes or enzymes depending on the particular application being performed.

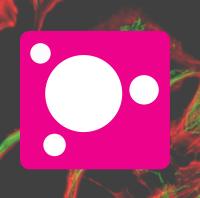
In order to effectively detect primary antibody, a secondary antibody raised against immunoglobulin matching the primary antibody host species, immunoglobulin class and subclass is required. To reduce non-specific background staining in certain applications, the host species of the secondary antibody should not be the same as the target species detected by the primary antibody.

To complement BIOZOL's extensive primary antibody portfolio, our range of monoclonal and polyclonal secondary antibodies are available in multiple formats for flexible assay design.





Innovations Inside Everyone



IVD Grade Reagents

Highly purified, IVD grade reagents manufactured with reproducibility and quality in mind. Prepared using GMP and ISO standards. Some of our most popular reagents:

- * Goat anti-Mouse IgG
- * Goat anti-Rabbit IgG
- * Donkey anti-Goat IgG
- * Immunoglobulins
- * HRP Conjugates



Bulk Immunoglobulins

Immunoglobulins (IgG's) can be used as heterophilic blocking agents for many in vitro diagnostic applications to prevent false positive results. We manufacture large scale IgG's from various species.

- * Hamster, Human, Goat, Mouse, Rabbit, Rat, Sheep
- * Purified Protein A or Protein G
- * >95% Purity
- * 100 mg to 1 kg



Antibodies

ImmunoReagents is widely regarded as the world's premier secondary antibody manufacturing company. All of our antibodies are manufactured at our Raleigh, NC facilities.

- * Affinity Purified / Ig Fraction / Serum
- * Secondary Antibodies / Primary Antibodies
- * Variety of host species and reactivity species
- * Full Range of conjugates including HRP/ Biotin/ Others



Conjugates

Conjugated antibodies have been "tagged" or "labeled" with enzymes, fluorphores, or other compounds. Most immunoassays depend on conjugated antibodies to provide visualization of the reaction.

- * Alkaline Phosphatase
- * Allophycocyanin
- * Biotin
- * DyLight®

- * FITC
- * Horseradish Peroxidase
- * TRITC
- * Others



Normal Sera

Normal non-immune serum has a variety of uses in immunoassays. It contains a full range of endogenous serum proteins, including all classes of immunoglobulins found in normal, healthy animals.

- * Donkey
- * Horse
- * Pig

- * Goat
- * Human
- * Rabbit
- * Guinea Pig
- * Llama
- * Rat



Custom Services

ImmunoReagents has decades of experience with custom manufacturing, packaging, and assay development. We offer competitive pricing and top quality service. ImmunoReagents operates under GMP and ISO 13485 standards, and is well suited for your custom projects.

- * Antibody Development
- * Antiserum Development
- * Antibody Purification
- * Custom Packaging
- * Custom Buffer Formulation * OEM Labeling



Jackson ImmunoResearch specializes in producing affinity-purified secondary antibodies for life science applications. Our reputation as a trusted supplier is founded on over 35 years of experience in immunoglobulin purification, conjugation and lyophilization.

We can manufacture and supply most standard inventory immunoreagents in bulk volumes upon request.

Host Species: Alpaca • Goat • Donkey • Mouse • Rabbit • Rat • Bovine

Target Species: Anti-Mouse • Anti-Rabbit • Anti-Human • Anti-Rat • Anti-Bovine • Anti-Cat • Anti-Chicken Anti-Dog • Anti-Goat • Anti-Guinea Pig • Anti-Hamster • Anti-Horse • Anti-Sheep • Anti-Swine

Whole IgG antibodies are isolated as intact molecules from antisera by affinity chromatography. The whole IgG form of antibodies is suitable for the majority of immunodetection procedures and is the most cost effective.

F(ab')2 fragments of antibodies are generated by pepsin digestion of whole IgG antibodies to remove most of the Fc region while leaving intact some of the hinge region. They are used for specific applications, such as to avoid binding of antibodies to live cells with Fc receptors or to Protein A or Protein G.

Fab fragments are the antibody binding regions of an antibody. They are useful reagents for blocking endogenous lg, double labeling primary antibodies from the same host species, and Fab-labeling primary antibodies to replace chemical conjugation - **FabuLight™**.

Conjugate Options: HRP, Alkaline Phosphatase, Fluorophores (see table), Biotin and Colloidal Gold.

Fluorophore	Excitation Peak	Emission Peak (nm)
DyLight 405	400	421
Brilliant Violet 421™	407	421
Aminomethylcoumarin, AMCA	350	450
Brilliant Violet 480™	436	478
Cyanine, Cy2	492	510
Alexa Fluor® 488	493	519
Fluorescein, FITC/DTAF	492	520
Indocarbocyanine, Cy3	550	570
R-Phycoerythrin R-PE	many, 488	580
Rhodamine Red-X, RRX	570	590
Alexa Fluor® 594	591	614
Allophycocyanin APC	many, 650	660
Alexa Fluor® 647	651	667
Indodicarbocyanine, Cy5	650	670
Peridinin-Chlorophyll-protein PerCP	many, 488	675
Alexa Fluor® 680	684	702
Alexa Fluor® 790	792	803

Anti-Mouse IgG Subclass Specific Antibodies

These highly specific antibodies are designed to distinguish between two or more different subclasses of mouse IgG in multiple labeling experiments, or for mouse IgG subclass determination.

Anti-Light Chain-Specific Antibodies for Western Blotting after IP

Anti-light chain specific antibodies do not bind to the reduced and denatured IgG heavy chain band (50 kDa) on blots. Therefore, by using anti-light chain specific antibodies, detection of antigens with molecular weights near 50 kDa is not obscured by large amounts of reduced and denatured IgG heavy chains from primary antibodies used for immunoprecipitation (IP).

Antibodies for Signal Enhancement/Conversion

IgG fraction monoclonal mouse anti-biotin, anti-fluorescein, and anti-digoxin may be used either as direct conjugates, or for more sensitivity, they can be used unconjugated followed by a conjugated anti-mouse IgG (H+L) for signal enhancement. Affinity-purified anti horseradish peroxidase (HRP) may be used to detect HRP or to enhance signal by binding to HRP-conjugated molecules.

Blocking and Control Reagents

- ChromPure™ proteins are primarily used as experimental controls for either primary or secondary antibodies. They are available conjugated to a range of fluorescent dyes and reporter enzymes.
- Normal serums are obtained from non-immunized animals and consequently do not detect any specific antigen. Normal serum is recommended for use as a blocking agent to reduce background from nonspecific, conserved- sequence, and/or Fc-receptor binding.
- Bovine serum albumin (BSA) is used extensively as a carrier protein to dilute antibodies and as a general protein blocking agent in immunoassays and immunodetection protocols. JIR Bovine Serum Albumin is verified to be IgG- and protease-free, alleviating many problems associated with commonly available preparations.

Streptavidin

Streptavidin conjugates are recommended for use with Biotin-SP conjugated affinity-purified secondary antibodies and ChromPure™ proteins, as well as with any biotinylated primary or secondary antibody, or oligonucleotide.



Nordic-MUbio's broad range of secondary antibodies including Biologo and Gallus branded antibodies, are available conjugated to a variety of labels for colorimetric, chromogenic, chemiluminescent or fluorescent detection of target antigen.

All products are produced according to strict ISO 9001:2008 standards. Next to this, Nordic-MUbio has an extensive QA/QC program which is performed in-house and in close cooperation with external partners. In this way, Nordic-MUbio offers well-documented and reliable products suitable for multiple applications.

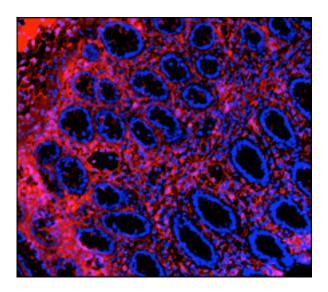
Nordic MUbio's most recent acquisition is the Gallus range of egg-derived polyclonal secondary antibodies. Directed against a comprehensive array of mammalian targets including Bovine, Cervid, Rat, Dog, Horse, Human, Mouse, Pig, Rabbit and Sheep. These chicken antibodies are available for detection of specific immunoglobulin classes and formats such as IgG heavy and light chains, the antibody Fc region, Fab fragments or IgM light chain (lambda and kappa). The Gallus range also includes a selection of anti Chicken IgY, IgM and IgA antibodies (detecting heavy and light chains, Fab or Fc fragments) for use with their polyclonal chicken primary antibodies. Production of polyclonal antibodies in chickens is the humane alternative to polyclonal production in mammals; no animal bleeds are required, antibody is simply purified from the eggs.

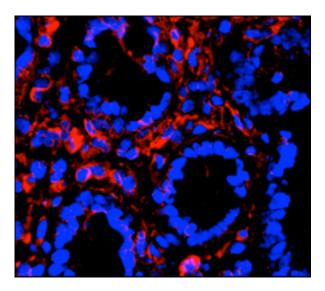
Our complete secondary antibody catalogue includes:

- Antibodies generated in host species: Chicken, Swine, Sheep, Rat, Rabbit, Mouse, Goat or Donkey.
- Against immunoglobulin species: Bovine, Cat, Cervid, Chicken, Dog, Duck, Goat, Guinea Pig, Hamster, Horse, Human, Monkey, Mouse, Pigeon, Plant, Rabbit, Rat, Sheep, Swine or Turkey.
- Targeting whole immunoglobulins: IgG, IgM, IgY, IgA, IgD and IgE, IgG and IgA immunoglobulin subclasses and immunoglobulin fragments such as heavy chain, light chain, Fab fragments and Fc region.
- Labels available: Biotin, FITC, HRP, Texas Red, TRITC and Agarose.
- Suitable for use in applications: immunofluorescence, immunohistochemistry, western blot, immunocytochemistry or ELISA.

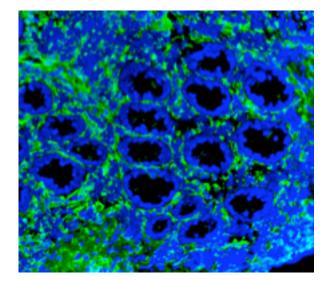
See individual product pages for more details on antibody specificities and recommended use.

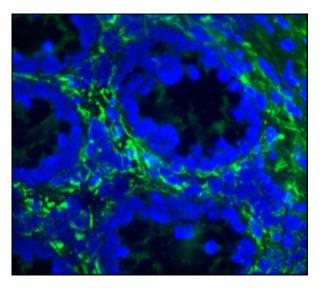
Goat anti Mouse IgG1 IgG2a IgG2b IgG3 (Fc specific) polyclonal secondary antibody





GAM/IgG(Fc)/TRITC was used at a 1:40 dilution on swine colon, in combination with the primary monoclonal antibody to Vimentin, clone RV202 (MUB1900P), used at a 1:1000 dilution. The red staining shows the connective tissue cells, while the blue colour is DAPI staining for DNA (cell nuclei). As expected, no significant staining is seen in the epithelial cells of the intestinal crypts.





GAM/IgG(Fc)/FITC was used at a 1:100 dilution on swine colon, in combination with the primary monoclonal antibody to Vimentin, clone RV202 (MUB1900P), used at a 1:1000 dilution.



Polyclonal & Monoclonal Secondary Antibodies



Quality Antibodies for Quality Research

SouthernBiotech is dedicated to the development, production, purification, conjugation, and commercialization of the world's highest quality antibodies for research use. We continue our commitment to producing and providing the highest quality reagents for your research use, manufactured in our ISO 9001:2015 certified facilities.

As one of the world's oldest antibody companies, many of our customers began using our reagents as students; and now, they continue to do so as heads of major academic, pharmaceutical, biotechnology, and governmental research labs located in all 50 states, Canada, Central and South America, Europe, Africa, Asia, and other Pacific Rim countries.

Secondary Antibodies

Secondary antibodies are polyclonal and monoclonal antibodies directed against an immunoglobulin (Ig) molecule. They are typically used in conjunction with an antigen specific primary antibody and are usually labeled to aid in detection.

Secondary antibodies are useful in numerous applications including:

- ELISA
- Immunoblotting
- Flow Cytometry
- Immunohistochemistry
- Immuocytochemistry

Secondary antibodies are typically labeled with enzymes or fluorochromes which enable detection via colorimetric, chemiluminescent, and fluorescent technologies. For example, the enzymes horseradish peroxidase (HRP) and alkaline phosphatase (AP) are valuable in ELISA and western blot applications through both colorimetric and chemiluminescent platforms. Fluorochromes such as fluorescein (FITC), phycoerythrin (PE), and cyanine (CY) are essential in fluorescent based applications which include in flow cytometry, immunofluorescence microscopy, and multiplexing assays.

Secondary antibodies allow for flexibility in labeling and detection as well as increased sensitivity through the signal amplification.



Secondary and Tertiary Detection Reagents

Our secondary antibodies are prepared by hyper-immunizing animals in a manner that produces high affinity antibodies. These are then purified by an affinity chromatography procedure designed to remove any low-affinity antibodies. Cross-reactivities that can interfere with specific labeling are removed by solid-phase adsorption techniques. The final product is then subjected to rigorous quality-control assays including immunodiffusion, solid-phase enzyme immunoassays, gel electrophoresis, solid-phase binding assays and IHC tissue staining. These unconjugated antibodies are used to generate our enzyme conjugated and biotinylated secondary antibodies.

Biotinylated and Unconjugated Secondary Antibodies

Our high-affinity, purified, biotinylated and unconjugated secondary antibodies are manufactured under controlled conditions to retain maximum specificity and affinity. Our secondary antibodies are subjected to rigorous quality control assays and can be used for tissue and cell staining, ELISAs, and blotting.

	Biotinylated					Unconjugated			
	Host Species (Concentrate)			Host Species (R.T.U.)+		Host Species (Concentrate)			
Secondary Antibodies	Goat	Rabbit	Horse	Goat	Horse	Goat	Rabbit	Horse	
Anti-Cat IgG (H+L)	BA-9000								
Anti-Chicken IgG (H+L)	BA-9010								
Anti-Goat IgG (H+L)		BA-5000							
Anti-Goat IgG (H+L)			BA-9500		BP-9500		AI-5000		
Anti-Guinea Pig IgG (H+L)	BA-7000								
Anti-Hamster IgG (H+L)	BA-9100					AI-9100			
Anti-Horse IgG (H+L)	BA-8000								
Anti-Mouse IgG (H+L)			BA-2000		BP-2000	AI-9200			
Anti-Mouse IgG (H+L), rat adsorbed			BA-2001						
Anti-Mouse IgG (H+L)	BA-9200			BP-9200				AI-2000	
Anti-Mouse IgM (H+L), mu chain specific	BA-2020								
Anti-Rabbit IgG (H+L)	BA-1000			BP-9100		AI-1000			
Anti-Rabbit IgG (H+L)			BA-1100		BP-1100				
Anti-Rat IgG (H+L)		BA-4000					AI-4000		
Anti-Rat IgG (H+L), mouse adsorbed		BA-4001					AI-4001		
Anti-Rat IgG (H+L)	BA-9400			BP-9400					
Anti-Rat IgG (H+L), mouse adsorbed	BA-9401								
Anti-Sheep IgG (H+L)		BA-6000							
Anti-Swine IgG (H+L)	BA-9020								
Universal Anti-Mouse/Rabbit IgG (H+L)			BA-1400		BP-1400				
Universal Pan-Specific Anti-Mouse/Rabbit/Goat IgG (H+L)			BA-1300						

[†] Ready-to-use, prediluted stabilized solutions

Enzyme Conjugated Secondary Antibodies

Our high-affinity, purified antibodies are cross-linked with alkaline phosphatase (AP) or horseradish peroxidase (HRP) of the highest specificity. Our conjugation method ensures the maximum preservation of enzyme activity and antibody specificity. Recommended applications include tissue staining, ELISAs, and blotting.

Product	Catalog Number		
Alkaline Phosphatase			
Anti-Mouse IgG (H+L) made in horse Alkaline Phosphatase labeled	AP-2000		
Anti-Rabbit IgG (H+L) made in goat Alkaline Phosphatase labeled	AP-1000		
Peroxidase			
Anti-Mouse IgG (H+L) made in horse Peroxidase labeled	PI-2000		
Anti-Rabbit IgG (H+L) made in goat Peroxidase labeled	PI-1000		
Anti-Human IgG (H+L) made in goat Peroxidase labeled	PI-3000		
Anti-Goat IgG (H+L) made in horse Peroxidase labeled	PI-9500		

Avidin and Streptavidin Enzyme Conjugates

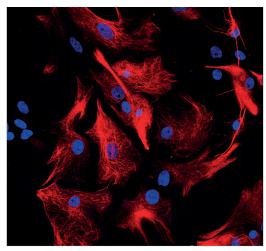
Our enzyme-conjugated avidin and streptavidin are suitable for use in solid-phase assays, tissue/cell staining systems, and blotting. The conjugates are produced in optimized ratios with enzymes of the highest specific activity. Covalent linkages are specifically chosen to provide stable, highly active conjugates.

Product	Catalog Number	
Alkaline Phosphatase		
Alkaline Phosphatase Streptavidin	SA-5100	
Alkaline Phosphatase Avidin D	A-2100	
Peroxidase		
Horseradish Peroxidase Streptavidin, concentrate	SA-5004	
Horseradish Peroxidase Streptavidin, R.T.U.	SA-5704	
Horseradish Peroxidase Avidin D, concentrate	A-2004	
Horseradish Peroxidase Avidin D, R.T.U.	A-2704	

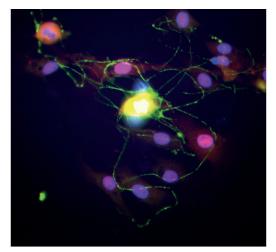
Fluorophore-conjugated secondary antibodies

We offer researchers a range of traditional and contemporary conjugated fluorophores, including fluorescein, rhodamine, Texas Red®, AMCA and phycoerythrin. DyLight® dyes offer greater photostability, pH independence and brighter fluorescence than conventional fluorophores. The Cy®3 and Cy®5 Dyes offer bright and stable fluorescence and are used in a variety of applications.

Product	AMCA	Fluorescein	Texas Red®	Kits: AMCA, Fluorescein, Texas Red®	DyLight® 488	DyLight® 549	DyLight® 594	DyLight® 649	R-Phycoerythrin	Cy®3	Cy®5
Anti-Mouse IgG (H+L), made in horse	CI-2000	FI-2000	TI-2000	FI-2100	DI-2488	DI-2549	DI-2594	DI-2649	EI-2007	CY-2300	CY-2500
Anti-Rabbit IgG (H+L), made in goat	CI-1000	FI-1000	TI-1000	FI-1200	DI-1488	DI-1549	DI-1594	DI-1649		CY-1300	CY-1500



Astrocytes: Stained for GFAP and detected with DyLight® 594-conjugated secondary antibody. Mounted in VECTASHIELD® HardSet™ Mounting Medium with DAPI. Image courtesy of Dr. Emma East, Department of Life Sciences, The Open University, Milton Keynes, UK.



Dorsal root ganglia cells (neurons and satellite glia): Beta III tubulin(ms), DyLight® 549 Anti-Mouse IgG • s100(rb), DyLight® 488 Anti-Rabbit IgG mounted in VECTASHIELD® HardSet™ Mounting Medium with DAPI. Image courtesy of Dr. Emma East, Department of Life Sciences, The Open University, Milton Keynes, UK.

Agrisera

Agrisera is a Swedish company specializing in polyclonal and monoclonal antibody production, offering over 2000 secondary antibodies for various applications and in various quantities. Agrisera offers a large collection of validated, high quality secondary antibodies, conjugated and unconjugated, for chemiluminescent, fluorescent and chromogenic detection in a wide range of applications. With 30 years experience in the antibody business they are proud to say there are few problems they cannot help you to solve. Their experienced scientific staff are on hand to answer your queries promptly.



BioVision secondary antibodies have been isolated from a variety of host species and conjugated to commonly available probes like HRP, FITC, Cy3, Texas Red, AMCA, AP, Biotin, etc. They can be used with colorimetric or fluorometric detection platforms. These antibodies are compatible with numerous detection, purification and sorting applications. All secondary antibodies are available in convenient sizes and competitive prices.



GeneTex offers over 1000 secondary antibodies to give our customers additional flexibility in their experimental design. We also offer several specialized secondary antibodies including secondary antibodies conjugated to next-generation DyLight dyes, EasyBlot for the selective recognition of non-denatured primary antibodies, HRP polymers for enhanced signal strength and avidin conjugates for the detection of biotinylated antibodies



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