molecular probes®
by life technologies™

Goat Anti–Mouse IgG Antibodies

Table 1 Contents and storage

Material	Amount	Concentration	Storage	Stability
Whole antibodies	0.5 mL	2 mg/mL in 0.1 M sodium phosphate, 0.1 M NaCl, 5 mM sodium azide, pH 7.5	• 2–8°C • Protect from light • Avoid freeze-thaw cycles	When stored undiluted as directed, products are stable for at least 3 months.†
$F(ab')_2$ Fragments	250 µL			
R-phycoerythrin (R-PE) conjugates	1 mL	1 mg/mL in 0.1 M sodium phosphate, 0.1 M NaCl, 5 mM sodium azide, pH 7.5	• 2–8°C • Protect from light • DO NOT FREEZE	When stored undiluted as directed, products are stable for at least 3 months.
Allophycocyanin (APC) conjugates*	0.5 mL			
Alexa Fluor® dye–R-PE and –APC tandem conjugates	100 µL	1 mg/mL in 0.1 M sodium phosphate, 0.1 M NaCl, 2 mM EDTA, 1% glycerol, 5 mM sodium azide, pH 7.5‡		
BODIPY® FL whole antibody conjugates	1 mg	Lyophilized powder from 0.1 M sodium phosphate, 0.1 M NaCl, 1.5% bovine serum albumin, 0.01% thimerosal, pH 7.5	• ≤–20°C • Desiccate • Protect from light • Avoid freeze-thaw cycles	When stored as directed, products are stable for at least 6 months.

* APC conjugates are prepared from chemically crosslinked APC to avoid dissociation of the molecule into subunits when highly diluted.[1]
† For longer storage, divide solution into single-use aliquots and freeze at ≤–20°C, which are stable for at least 6 months.
‡ May also contain 1% Prionex reagent as a stabilizer.

Spectral data: For Goat anti–mouse antibodies, see Table 2 (page 3); for R-phycoerythrin, allophycocyanin, and tandem conjugates of goat anti–mouse IgG antibodies, see Table 3 (page 4); for Qdot® conjugates of goat anti–mouse IgG antibodies , see Table 4 (page 4).

Introduction

Life Technologies offers an extensive line of goat anti–mouse IgG conjugates labeled with a wide selection of premium fluorescent dyes or with biotin (Table 2, page 3). We also offer goat anti–mouse IgG conjugated with fluorescent phycobiliproteins, R-phycoerythrin (R-PE) or allophycocyanin (APC), or with phycobiliprotein–dye "tandem" constructs[2] (Table 3, page 4), as well as Qdot® nanocrystal conjugates (Table 4, page 4).

Fluorescent anti–mouse IgG conjugates are ideal for fluorescence microscopy and confocal laser scanning microscopy, flow cytometry, and fluorescent western detection. The breadth of fluorescent markers we offer allow our reagents to be tailored to almost any fluorescent detection system. In addition to conjugates of whole IgG antibodies, conjugates of $F(ab')_2$ fragments, and highly cross-adsorbed whole antibodies are available in several fluorescent colors (Table 2, page 3). Life Technologies' strict quality control procedures and long established expertise in labeling antibodies guarantee that each conjugate provides optimal fluorescence and performance.

In addition to the antibodies listed in this manual, Life Technologies offers fluorescent conjugates of many other species-specific anti-IgG antibodies, as well as conjugates of avidin, streptavidin, NeutrAvidin® biotin-binding protein, protein A, and protein G. For details, refer to our website at www.lifetechnologies.com or contact Technical Support.

Whole Antibody Conjugates

The goat anti–mouse IgG whole antibody conjugates are prepared from affinity-purified antibodies that react with IgG heavy chains and all classes of immunoglobulin light chains from mouse. To minimize cross-reactivity, the goat anti–mouse IgG whole antibodies have been adsorbed against human IgG and human serum prior to conjugation. The degree of labeling for each conjugate is typically 2–8 fluorophore or biotin molecules per IgG molecule; the exact degree of labeling is indicated on the certificate of analysis for each product lot. At the time of preparation, the products are certified to be free of unconjugated dyes and are tested in an immunofluorescence experiment to ensure low nonspecific staining.

$F(ab')_2$ Fragment Conjugates

Conjugates of $F(ab')_2$ fragments are sometimes preferable to whole antibody conjugates for secondary detection, since the absence of the Fc region in $F(ab')_2$ fragments prevents interactions with Fc receptor–bearing membranes. The $F(ab')_2$ fragments are prepared from antibodies that have been adsorbed against human IgG and serum to minimize cross-reactivity. The degree of labeling for each conjugate is typically 2–6 fluorophore or biotin molecules per $F(ab')_2$ fragment; the exact degree of labeling is indicated on the certificate of analysis for each product lot.

Highly Cross-Adsorbed Whole Antibody Conjugates

For researchers interested in highly cross-adsorbed antibodies, we provide labeled goat anti–mouse IgG whole antibodies that have been adsorbed against bovine IgG, goat IgG, rabbit IgG, rat IgG, human IgG, and human serum. These highly cross-adsorbed antibodies may be useful in multilabeling experiments, or for labeling cells or tissues where nonspecific staining has been a problem. Because our highly cross-adsorbed antibodies have been adsorbed against rat IgG, they are particularly useful for detecting mouse IgG in rat tissues or cells and in experiments in which antibodies from mouse are being detected in the presence of antibodies from rat. Note, however, that because rats and mice are closely related, the adsorption against rat IgG may have reduced the specificity of this goat anti–mouse IgG antibody preparation for certain mouse IgG subclasses. The degree of labeling for each conjugate is typically 2–8 fluorophore or biotin molecules per IgG molecule; the exact degree of labeling is indicated on the product label. At the time of preparation, the products are certified to be free of unconjugated dyes and are tested in an immunofluorescence to ensure low nonspecific staining.

Table 2 Goat anti–mouse antibodies

Label	Ex *	Em *	Whole antibody †	Highly cross adsorbed ‡	$F(ab')_2$ fragment †
Unlabeled	NA	NA	A10535		A10534
Biotin (Nonfluorescent) Conjugates					
Biotin-XX	NA	NA	B2763		B11027
DSB-X™ biotin	NA	NA		D20691	
Fluorescent Dye Conjugates					
Alexa Fluor® 350	346	442	A11045	A21049	A11068
Marina Blue®	365	460	M10991		
Cascade Blue®	400	420	C962		
Pacific Orange™	400	551			P31585
Alexa Fluor® 405	402	421	A31553		
Pacific Blue™	410	455	P10993	P31582	P31581
Pacific Green™	411	500		P11204	
Alexa Fluor® 430	434	539	A11063		
Fluorescein	494	518	F2761		F11021
Alexa Fluor® 488	495	519	A11001	A11029	A11017
Oregon Green® 488	496	524	O6380	O11033	
BODIPY® FL	505	513	B2752		
Oregon Green® 514	511	530	O6383		
Alexa Fluor® 514	518	540	A31555		
Alexa Fluor® 532	531	554	A11002		
Cy®3	552	570	A10521		
Tetramethylrhodamine	555	580	T2762		
Alexa Fluor® 546	556	573	A11003	A11030	A11018
Alexa Fluor® 555	555	565	A21422	A21424	A21425
Rhodamine Red™-X	570	590	R6393		
Alexa Fluor® 568	578	603	A11004	A11031	A11019
Alexa Fluor® 594	590	617	A11005	A11032	A11020
Texas Red®	595	615	T862		
Texas Red®-X	595	615	T6390		
Alexa Fluor® 633	632	647	A21050	A21052	A21053
Alexa Fluor® 635	633	647	A31574	A31575	
Cy®5	649	670	A10524		
Alexa Fluor® 647 §	650	668	A21235	A21236	A21237
Alexa Fluor® 660 §	663	690	A21054	A21055	
Alexa Fluor® 680 §	679	702	A21057	A21058	A21059
Alexa Fluor® 700 §	702	723	A21036		
Alexa Fluor® 750 §	749	775	A21037		
Alexa Fluor® 790 §	784	814	A11375	A11357	

***** Approximate fluorescence excitation (Ex) and emission (Em) maxima, in nm, for conjugates. Complete spectra for most of these dyes are available at our website (www.lifetechnologies.com).
† Cross-adsorbed against human IgG and human serum.
‡ Whole antibody, cross-adsorbed against bovine IgG, goat IgG, rabbit IgG, human IgG and serum, and rat IgG.
§ Human vision is insensitive to light beyond ~650 nm, and therefore it is not possible to view the fluorescence of these dyes by looking through a conventional fluorescence microscope.
NA = Not applicable.

Table 3 R-Phycoerythrin, allophycocyanin, and tandem conjugates of goat anti–mouse IgG antibodies

Label	Ex *	Em *	Cat. no. †	$F(ab')_2$ fragment
R-Phycoerythrin (R-PE) and Tandem–R-PE Conjugates				
R-Phycoerythrin	496, 546, 565 ‡	578	P852	A10543
Alexa Fluor® 610–R-PE	496, 546, 565 ‡	630	A20980	
Alexa Fluor® 647–R-PE	496, 546, 565 ‡	668	A20990	
Alexa Fluor® 680–R-PE	496, 546, 565 ‡	702	A20983	
Allophycocyanin (APC) and Tandem-APC Conjugates				
Allophycocyanin §	650	660	A865	A10539
Alexa Fluor® 680–APC §	650	702	A21000	
Alexa Fluor® 750–APC §	650	775	A21006	

*Approximate fluorescence excitation (Ex) and emission (Em) maxima, in nm, for conjugates. † Cross-adsorbed against human IgG and human serum. ‡ Multiple absorbance peaks. § Human vision is insensitive to light beyond ~650 nm, and therefore it is not possible to view the fluorescence of these dyes by looking through a conventional fluorescence microscope.

Table 4 Qdot® conjugates of goat anti–mouse IgG antibodies

Label	Ex *	Em *	$F(ab')_2$ fragment †
Qdot® 525	<525	525	Q11041MP
Qdot® 565	<565	565	Q11032MP, Q11031MP
Qdot® 585	<585	585	Q11011MP
Qdot® 605	<605	605	Q11002MP, Q11001MP
Qdot® 625	<625	625	A10195
Qdot® 655	<655	655	Q11022MP, Q11021MP
Qdot® 705	<705	705	Q11062MP, Q11061MP

* Qdots are excitable (Ex, in nm) at any wavelength below their emission maxima (Em, in nm). For most practical applications, they should be exited at wavelengths below 450 nm. For additional information, refer to the product manual "Qdot® Streptavidin Conjugates", available at www.lifetechnologies.com/manuals.
† Cross-adsorbed against human IgG and human serum.

Guidelines for Use

Preparing BODIPY® FL Conjugates

After reconstitution with 0.5 mL deionized water, the BODIPY® FL product can be stored up to 2 weeks at 2–8°C. For longer storage, divide into single-use aliquots and freeze at ≤–20°C. Frozen aliquots are stable for at least 6 months.

Using Conjugate Solutions

Centrifuge the protein conjugate solution briefly in a microcentrifuge before use; add only the supernatant to the experiment. This step eliminates any protein aggregates that may have formed during storage, thereby reducing nonspecific background staining.

Because staining protocols vary with application, the appropriate dilution of antibody should be determined empirically. For the fluorophore- and biotin-labeled antibodies, including the phycoerythrin-, allophycocyanin-, and tandem-labeled antibodies, a final concentration of 1–10 µg/mL should be satisfactory for most immunohistochemical applications.[3] For flow cytometry applications, 0.06–1.0 µg per 1×10^6 cells should yield satisfactory results.

Alexa Fluor® 680 and Alexa Fluor® 790 IgG conjugates have been validated for fluorescent western detection and are compatible with most standard fluorescent western instrumentation. They are amenable to standard western blot fluorescent detection protocols and can be used in single or multicolored experiments. For more information, refer to the technical note: *Multicolored Western Detection Using Alexa Fluor® Secondary Antibodies*, available for downloading at www.lifetechnologies.com or by contacting Technical Support.

References

1. Cytometry 8, 91 (1987); **2.** Our tandem constructs comprise a donor phycobiliprotein, such as R-PE or APC, coupled to a longer-wavelength light–emitting fluorescence acceptor. By the process of fluorescence resonance energy transfer (FRET), an energy transfer cascade is established wherein most of the light absorbed by the donor R-PE or APC results in fluorescence of the acceptor dye. This process can be quite efficient, resulting in almost total transfer of energy to the acceptor dye.; **3.** Short Protocols in Molecular Biology, 2nd Edition, F.M. Ausubel et al., Eds., John Wiley and Sons (1992) pp. 14-24–14-30.

Product List Current prices may be obtained from our website or from our Customer Service Department.

Cat. no.	Product Name	Unit Size
A11045	Alexa Fluor® 350 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A21049	Alexa Fluor® 350 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A31553	Alexa Fluor® 405 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11063	Alexa Fluor® 430 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11017	Alexa Fluor® 488 F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
A11001	Alexa Fluor® 488 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11029	Alexa Fluor® 488 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A31555	Alexa Fluor® 514 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11002	Alexa Fluor® 532 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11018	Alexa Fluor® 546 F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
A11003	Alexa Fluor® 546 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11030	Alexa Fluor® 546 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A21425	Alexa Fluor® 555 F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
A21422	Alexa Fluor® 555 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A21424	Alexa Fluor® 555 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A11019	Alexa Fluor® 568 F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
A11004	Alexa Fluor® 568 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11031	Alexa Fluor® 568 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A11020	Alexa Fluor® 594 F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
A11005	Alexa Fluor® 594 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11032	Alexa Fluor® 594 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A20980	Alexa Fluor® 610–R-phycoerythrin goat anti-mouse IgG (H+L) *1 mg/mL*	100 µL
A21053	Alexa Fluor® 633 F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
A21050	Alexa Fluor® 633 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A21052	Alexa Fluor® 633 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A31574	Alexa Fluor® 635 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A31575	Alexa Fluor® 635 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A21237	Alexa Fluor® 647 F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
A21235	Alexa Fluor® 647 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A21236	Alexa Fluor® 647 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A20990	Alexa Fluor® 647–R-phycoerythrin goat anti-mouse IgG (H+L) *1 mg/mL*	100 µL
A21054	Alexa Fluor® 660 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A21055	Alexa Fluor® 660 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL

A21059	Alexa Fluor® 680 F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
A21057	Alexa Fluor® 680 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A21058	Alexa Fluor® 680 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A21000	Alexa Fluor® 680–allophycocyanin goat anti-mouse IgG (H+L) *1 mg/mL*	100 µL
A20983	Alexa Fluor® 680–R-phycoerythrin goat anti-mouse IgG (H+L) *1 mg/mL*	100 µL
A21036	Alexa Fluor® 700 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A21037	Alexa Fluor® 750 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A21006	Alexa Fluor® 750–allophycocyanin goat anti-mouse IgG (H+L) *1 mg/mL*	100 µL
A11375	Alexa Fluor® 790 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A11357	Alexa Fluor® 790 goat anti-mouse IgG (H+L) *highly cross-absorbed* *2 mg/mL*	0.5 mL
A865	allophycocyanin, crosslinked, goat anti-mouse IgG (H+L) *1 mg/mL*	0.5 mL
A10539	allophycocyanin, crosslinked, F(ab')$_2$ fragment of goat anti-mouse (H+L) *1 mg/mL*	250 µL
B11027	biotin-XX F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
B2763	biotin-XX goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
B2752	BODIPY® FL goat anti-mouse IgG (H+L)	1 mg
C962	Cascade Blue® goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A10521	Cy®3 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A10524	Cy®5 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
D20691	DSB-X™ biotin goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
A10534	F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
F11021	fluorescein F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
F2761	fluorescein goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A10535	goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
G21061	goat anti-mouse IgG (H+L), CMNB-caged fluorescein conjugate *2 mg/mL*	250 µL
M10991	Marina Blue® goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
O6380	Oregon Green® 488 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
O11033	Oregon Green® 488 goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
O6383	Oregon Green® 514 goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
P31581	Pacific Blue™ F(ab')$_2$ fragment of goat anti-mouse IgG (H+L)	250 µL
P10993	Pacific Blue™ goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
P31582	Pacific Blue™ goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
P11204	Pacific Green™ goat anti-mouse IgG (H+L) *highly cross-adsorbed* *2 mg/mL*	0.5 mL
P31585	Pacific Orange™ F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *2 mg/mL*	250 µL
R6393	Rhodamine Red™-X goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
A10543	R-phycoerythrin F(ab')$_2$ fragment of goat anti-mouse IgG (H+L) *1 mg/mL*	250 µL
P852	R-phycoerythrin goat anti-mouse IgG (H+L) *1 mg/mL*	1 mL
T2762	tetramethylrhodamine goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
T862	Texas Red® goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL
T6390	Texas Red®-X goat anti-mouse IgG (H+L) *2 mg/mL*	0.5 mL

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These high-quality reagents and materials must be used by, or directly under the supervision of, a technically qualified individual experienced in handling potentially hazardous chemicals. Read the Safety Data Sheet provided for each product; other regulatory considerations may apply.

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