Goat anti-Rat IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor 488

Product Details	
Size	1 mg
Species	Rat
Published Species	Rat
Expression System	Goat / IgG
Class	Polyclonal
Type	Secondary Antibody
Conjugate	Alexa Fluor® 488
Immunogen	Gamma Immunoglobins Heavy and Light chains
Form	Liquid
Concentration	2 mg/mL
Purification	purified
Storage buffer	PBS, pH 7.5
Contains	5mM sodium azide
Storage Conditions	4° C, store in dark
RRID	AB_2534074

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	1-10 µg/mL	9 Publications
Immunocytochemistry (ICC)	4 µg/mL	25 Publications
Immunofluorescence (IF)	4 µg/mL	-
Immunohistochemistry (Frozen) (IHC (F))	-	12 Publications
Immunohistochemistry (IHC)	-	35 Publications
Immunohistochemistry (Paraffin) (IHC (P))	-	3 Publications
Immunohistochemistry - Free Floating (IHC (Free))	-	2 Publications
Miscellaneous PubMed (Misc)	-	133 Publications
Western Blot (WB)	-	1 Publication

Product Specific Information

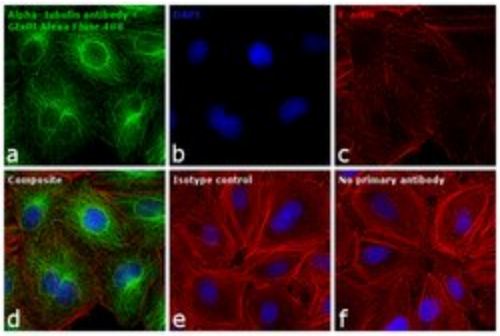
To minimize cross-reactivity, these goat anti-rat IgG whole antibodies have been cross-adsorbed against mouse IgG, mouse serum, and human serum prior to conjugation. Cross-adsorption or pre-adsorption is a purification step to increase specificity of the antibody resulting in higher sensitivity and less background staining. The secondary antibody solution is passed through a column matrix containing immobilized serum proteins from potentially cross-reactive species. Only the nonspecific-binding secondary antibodies are captured in the column, and the highly specific secondaries flow through. The benefits of this extra step are apparent in multiplexing/multicolor-staining experiments (e.g., flow cytometry) where there is potential cross-reactivity with other primary antibodies or in tissue/cell fluorescent staining experiments where there are may be the presence of endogenous

immunoglobulins.

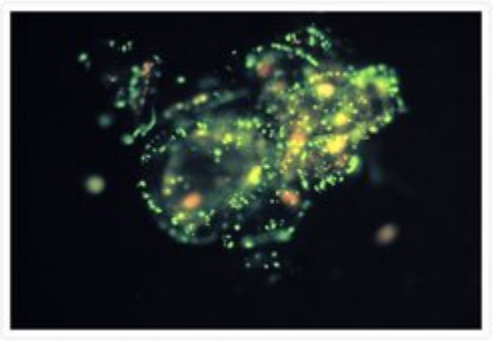
Alexa Fluor dyes are among the most trusted fluorescent dyes available today. Invitrogen™ Alexa Fluor 488 dye is a bright, green-fluorescent dye with excitation ideally suited to the 488 nm laser line. For stable signal generation in imaging and flow cytometry, Alexa Fluor 488 dye is pH-insensitive over a wide molar range. Probes with high fluorescence quantum yield and high photostability allow detection of low-abundance biological structures with great sensitivity. Alexa Fluor 488 dye molecules can be attached to proteins at high molar ratios without significant self-quenching, enabling brighter conjugates and more sensitive detection. The degree of labeling for each conjugate is typically 2-8 fluorophore molecules per IgG molecule; the exact degree of labeling is indicated on the certificate of analysis for each product lot.

Using conjugate solutions: Centrifuge the protein conjugate solution briefly in a microcentrifuge before use; add only the supernatant to the experiment. This step will help eliminate 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-labeled antibodies a final concentration of 1-10 µg/mL should be satisfactory for most immunohistochemistry and flow cytometry applications.

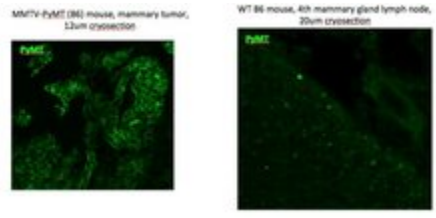
Product Images For Goat anti-Rat IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor 488



Rat IgG (H+L) Cross-Adsorbed Secondary Antibody (A-11006) in IF
Immunofluorescence analysis of Goat anti-Rat IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor® 488 conjugate was performed using A549 cells stained with alpha Tubulin (YL1/2) Rat Monoclonal Antibody (Product # MA1-80017). The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, blocked with 1% BSA for 1 hour and labeled with 2 µg/mL primary antibody for 3 hours at room temperature. Goat anti-Rat IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A-11006) was used at a concentration of 4 µg/mL in phosphate buffered saline containing 0.2% BSA for 45 minutes at room temperature, for detection of alpha Tubulin in the cytoplasm (Panel a: green). Nuclei (Panel b: blue) were stained with DAPI in SlowFade® Gold Antifade Mountant (Product # S36938). F-actin was stained with Rhodamine Phalloidin (Product # R415, 1:300) (Panel c: red). Panel d represents the composite image. No nonspecific staining was observed with the secondary antibody alone (panel f), or with an isotype control (panel e). The images were captured at 60X magnification.



Rat IgG (H+L) Cross-Adsorbed Secondary Antibody (A-11006) in IF
The abundance of pectin associated with the plasmodesmatal pit fields of kiwifruit cells. Pectin, a component of the cell wall matrix and the main constituent of the middle lamella that forms between daughter cell walls, was tagged with an anti-pectin monoclonal antibody, JIM 5. The primary antibody was detected and visualized with Alexa Fluor® 488 goat anti-rat IgG (Product # A-11006). The primary antibody was a gift from Dr. Paul Knox, University of Leeds, U.K. Image contributed by Paul Sutherland, The Horticulture and Food Research Institute of New Zealand, Ltd., Mt. Albert Research Centre.



Rat IgG (H+L) Cross-Adsorbed Secondary Antibody (A-11006) in IF
Immunofluorescence analysis of Polyoma Virus Medium T (green) in PyMT+ mammary tumor cells and mammary gland lymph node. Cells were stained with a Polyoma Virus Medium T Monoclonal Antibody (Product # MA1-46061) at a dilution of 1:500 overnight at 4C, and then incubated with secondary goat anti-rat IgG - Alexa Fluor 488 antibody (Product # A-11006) at a dilution of 1:500 for 1 hour. Data courtesy of Antibody Data Exchange Program.

220 References

Immunohistochemistry (35)

Oncoimmunology

Targeted overexpression of prostacyclin synthase inhibits lung tumor progression by recruiting CD4+ T lymphocytes in tumors that express MHC class II.

"A-11006 was used in Immunohistochemistry to demonstrate that prostacyclin can inhibit lung cancer progression and suggest that prostacyclin analogs may serve as novel immunomodulatory agents in a subset of lung cancer patients."

Authors: Li HY,McSharry M,Walker D,Johnson A,Kwak J,Bullock B,Neuwelt A,Poczobutt JM,Sippel TR,Keith RL,Weiser-Evans MCM,Clambey E,Nemenoff RA

Species
Rat
Not Applicable

Dilution
Not Cited
Not Cited

Year
2020

Frontiers in immunology

Dietary Toll-Like Receptor Stimulants Promote Hepatic Inflammation and Impair Reverse Cholesterol Transport in Mice via Macrophage-Dependent Interleukin-1 Production.

"A-11006 was used in Immunohistochemistry to demonstrate the link between consumption of processed food and the cardiovascular risks and how this can be combated by food microbiota."

Authors: Faraj TA,Stover C,Erridge C

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Dilution
1:500
1:500

Year
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View more IHC references on thermofisher.com

Miscellaneous PubMed (133)

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2020

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IHC (F) (12) ICC (25) Flow (9) WB (1) IHC (P) (3) IHC (Free) (2)