Goat anti-Rat IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor™ 647

Product Details	
Size	1 mg
Species Reactivity	Rat
Host/Isotype	Goat / IgG
Class	Polyclonal
Type	Secondary Antibody
Conjugate	Alexa Fluor™ 647
Excitation/Emission Max	650/671 nm
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_141778

Applications	Tested Dilution	Publications
Western Blot (WB)	Assay-dependent	-
Immunohistochemistry (IHC)	1-10 µg/mL	0 Publication
Immunohistochemistry (Paraffin) (IHC (P))	-	0 Publication
Immunohistochemistry (PFA fixed) (IHC (PFA))	-	0 Publication
Immunohistochemistry (Frozen) (IHC (F))	-	0 Publication
Immunohistochemistry - Free Floating (IHC (Free))	-	0 Publication
Immunocytochemistry (ICC/IF)	2 µg/mL	0 Publication
Flow Cytometry (Flow)	-	0 Publication
Immunoprecipitation (IP)	1:1,000	-
Miscellaneous PubMed (Misc)	-	0 Publication

Product Specific Information

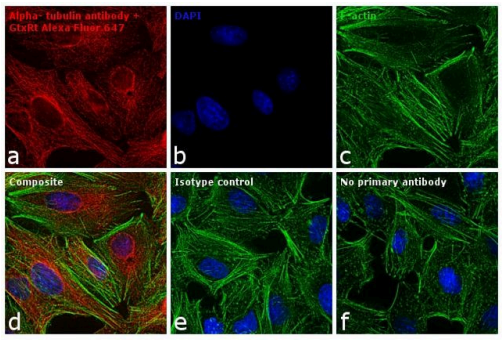
To minimize cross-reactivity, these goat anti-rat IgG (H+L) whole secondary antibodies have been affinity purified and cross-adsorbed against mouse IgG, mouse serum, and human serum. Cross-adsorption or pre-adsorption is a purification step to increase specificity of the antibody resulting in higher 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 647 dye is a near-infrared-fluorescent dye with excitation ideally suited to the 647 nm laser line. For stable signal generation in imaging and flow cytometry, Alexa Fluor 647 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 647 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.

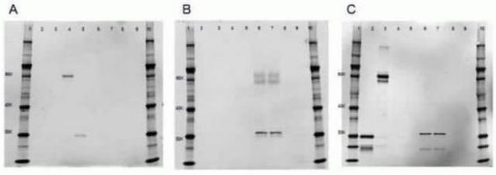
Product will be shipped at Room Temperature.

Product Images For Goat anti-Rat IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor™ 647



Rat IgG (H+L) Cross-Adsorbed Secondary Antibody (A-21247) in ICC/IF
Immunofluorescence analysis of Goat anti-Rat IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor® 647 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® 647 conjugate (Product # A-21247) was used at a concentration of 2 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: red). Nuclei (Panel b: blue) were stained with DAPI in SlowFade® Gold Antifade Mountant (Product # S36938). F-actin was stained with Alexa Fluor® 488 Phalloidin (Product # A12379), 1:300) (Panel c: green). 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-21247) in ICC/IF
U2OS cells were transduced using an adenoviral construct expressing mCherry. A) Native expression of mCherry detected post-transduction using Texas Red filters (562 nm/624 nm) B) Anti-Cherry antibody added and cells imaged using the Cy5 filter set (628 nm/692 nm) C) mCherry expression detected by adding anti-mCherry and Alexa Fluor® 647 goat anti-rat (Product # A-21247)



Rat IgG (H+L) Cross-Adsorbed Secondary Antibody (A-21247) in WB
After transfer of the proteins, the nitrocellulose membranes were probed with either (A) rabbit anti-GFP (Product # A-11122) and secondary antibody Alexa Fluor® 647 Goat Anti-Rabbit (Product # A-21245), (B) rat anti-mCherry (M11217) and secondary antibody Alexa Fluor® 647 Goat Anti-Rat (Product # A-21247) or (C) rabbit anti-RFP (Product # R10367) and secondary antibody Alexa Fluor® 647 Goat Anti-Rabbit (Product # A-21245). Lanes 1 and 10: Novex® Sharp Pre-Stained Protein Standards (LC5800). Lane 2: 20 µg of U2OS cell lysate expressing plasma membrane targeted TagRFP. Lane 3: mKate RFP-P62 fusion protein. Lane 4: TagGFP-P62 fusion protein. Lane 5: plasma membrane targeted Emerald GFP. Lanes 6 & 7: untargeted mCherry. Lanes 8 & 9: control. The anti-mCherry antibody is specific for mCherry protein and does not cross-react with either GFP or RFP.

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Dysfunctional -cell autophagy induces -cell stress and enhances islet immunogenicity. Front Immunol (2025)

Implantation of engineered adipocytes suppresses tumor progression in cancer models. Nat Biotechnol (2025)

Diverse microtubule-destabilizing drugs induce equivalent molecular pathway responses in endothelial cells bioRxiv (2025)

Temporal and spatial pattern of DNA damage in neurons following spinal cord Injury in mice. J Biomed Sci (2025)

Neonatal but not Juvenile Gene Therapy Reduces Seizures and Prolongs Lifespan in SCN1B-Dravet Syndrome Mice. J Clin Invest (2025)