

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

Catalog Number A-21244

Product data sheet

Details		Species Reactivity	
Size	500 µL	Species reactivity	Rabbit
Host/Isotope	Goat / IgG	Tested Applications	
Class	Polyclonal	Flow Cytometry (Flow)	1-10 µg/mL
Type	Secondary Antibody	Immunocytochemistry (ICC)	4 µg/mL
Immunogen	Gamma Immunoglobins Heavy and Light chains	Immunofluorescence (IF)	4 µg/mL
Target Class	IgG	Published Applications	
Cross Adsorption	Against human IgG, human serum, mouse IgG, mouse serum and bovine serum	Immunohistochemistry (IHC)	See 6 publications below
Antibody Form	Whole Antibody	Immunohistochemistry - Free Floating (IHC (Free))	See 2 publications below
Conjugate	Alexa Fluor® 647	Immunocytochemistry (ICC)	See 7 publications below
Form	liquid	Immunohistochemistry (Frozen) (IHC (F))	See 1 publications below
Concentration	2 mg/ml	Western Blot (WB)	See 2 publications below
Purification	purified	Miscellaneous PubMed (MISC)	See 39 publications below
Storage buffer	PBS, pH 7.5	Flow Cytometry (Flow)	See 2 publications below
Contains	5mM sodium azide	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Storage Conditions	4° C, store in dark		

Product specific information

To minimize cross-reactivity, these goat anti-rabbit IgG (H+L) whole secondary antibodies have been affinity purified and cross-adsorbed against human IgG, human serum, mouse IgG, mouse serum, and bovine 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 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.

Background/Target Information

We offer an extensive line of Invitrogen™ secondary antibody conjugates with well-characterized specificity and labeled with a wide selection of premium fluorescent dyes, including Invitrogen™ Alexa Fluor™ fluorescent dyes. Fluorescent secondary antibody conjugates are useful in the detection, sorting, or purification of its specified target and ideal for fluorescence microscopy and confocal laser scanning microscopy, flow cytometry, and fluorescent western

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

detection. The breadth of fluorescent markers we offer allows our reagents to be tailored to almost any fluorescent detection system. Secondary antibodies may be provided in three formats: whole IgG, divalent F(ab')₂ fragments, and monovalent Fab fragments. Because of the high degree of conservation in the structure of many immunoglobulin domains, most class-specific secondary antibodies must be affinity-purified and cross-adsorbed to achieve minimal cross-reaction with other immunoglobulins. Our secondary antibody conjugates are most commonly prepared by immunizing the host animal with a pooled population of immunoglobulins from the target species and can be further purified and modified (e.g., immunoaffinity chromatography, antibody fragmentation, label conjugation, etc.) to generate highly specific reagents. In the first round of purification, whole immunoglobulins binding to the immunizing antibody are recovered and mainly consist of the ~150-kDa IgG class. Further purification, for example, with Protein A or G, removes all unwanted immunoglobulin classes except the affinity-purified antibodies that react with the target-specific immunoglobulin heavy and/or light chains.

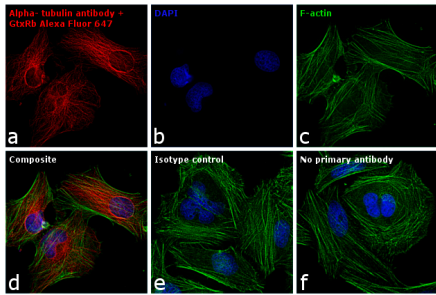
For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

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

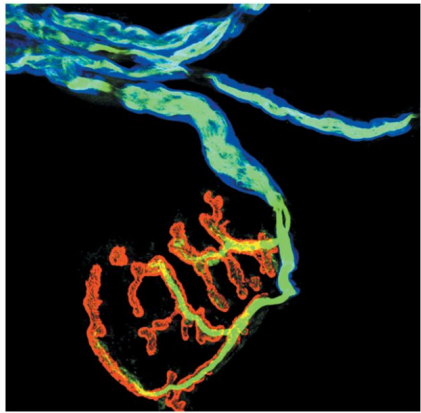


Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody (A-21244) in IF

Immunofluorescence analysis of Goat anti-Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor® 647 conjugate was performed using HeLa cells stained with alpha Tubulin Rabbit Polyclonal Antibody (Product # PA5-16891). 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-Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor® 647 conjugate (Product # A-21244) 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: 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.

Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody (A-21244) in IF

Acetylcholine receptors were stained with the tetramethylrhodamine conjugate of a-bungarotoxin (Product # T-1175). Axons were labeled with a primary antibody against neurofilaments and visualized with a green-fluorescent, fluorescein-labeled secondary antibody. Myelin was labeled using an antibody against P0 protein, visualized with Alexa Fluor® 647 goat anti-mouse IgG antibody (Product # A-21244) and pseudocolored blue. Image contributed by Felipe Court and R.R. Ribchester, University of Edinburgh, Scotland.



For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

PubMed References For Goat anti-Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor 647

6 Immunohistochemistry References

Species / Dilution	Summary
	A21244 was used in immunohistochemistry to quantify soluble triggering receptor expressed on myeloid cells 2 and amyloid levels in Alzheimer's disease mouse model brains
Not Applicable / 1:500	Frontiers in aging neuroscience (Sep 2017; 9: null) "Increase of TREM2 during Aging of an Alzheimer's Disease Mouse Model Is Paralleled by Microglial Activation and Amyloidosis." Author(s):Brendel M,Kleinberger G,Probst F,Jaworska A,Overhoff F,Blume T,Albert NL,Carlsen J,Lindner S,Gildehaus FJ,Ozmen L,Suárez-Calvet M,Bartenstein P,Baumann K,Ewers M,Herms J,Haass C,Rominger A PubMed Article URL: http://dx.doi.org/10.3389/fnagi.2017.00008
Not Applicable / 1:500	A-21244 was used in immunohistochemistry to study the interactions of beta-amyloid deposits and microglia in a mouse model of Alzheimer's disease
Not Applicable / 1:500	PLoS one (Mar 2016; 10: null) "Fibrillar amyloid plaque formation precedes microglial activation." Author(s):Jung CK,Keppler K,Steinbach S,Blazquez-Llorca L,Herms J PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0119768
Not Applicable / 1:1500	A-21244 was used in immunohistochemistry to analyze impairment of the regeneration of neuromuscular junctions by an inducible depletion of adult skeletal muscle stem cells
Not Applicable / 1:1500	eLife (Aug 2015; 4: null) "Inducible depletion of adult skeletal muscle stem cells impairs the regeneration of neuromuscular junctions." Author(s):Liu W,Wei-LaPierre L,Klose A,Dirksen RT,Chakkalakal JV PubMed Article URL: http://dx.doi.org/10.7554/eLife.09221
Not Applicable / 1:500	A-21244 was used in immunohistochemistry to develop and characterize 'spaghetti monster' fluorescent proteins
Not Applicable / 1:500	Nature methods (Jun 2015; 12: 568) "High-performance probes for light and electron microscopy." Author(s):Viswanathan S,Williams ME,Bloss EB,Stasevich TJ,Speer CM,Nern A,Pfeiffer BD,Hooks BM,Li WP,English BP,Tian T,Henry GL,Macklin JJ,Patel R,Gerfen CR,Zhuang X,Wang Y,Rubin GM,Looger LL PubMed Article URL: http://dx.doi.org/10.1038/nmeth.3365
Not Applicable / 1:500	A-21244 was used in immunohistochemistry to report that vein-derived endothelial tip cells contribute to emerging arteries in zebrafish
Not Applicable / 1:500	Nature communications (Dec 2014; 5: null) "Arteries are formed by vein-derived endothelial tip cells." Author(s):Xu C,Hasan SS,Schmidt I,Rocha SF,Pitulescu ME,Bussmann J,Meyen D,Raz E,Adams RH,Siekmann AF PubMed Article URL: http://dx.doi.org/10.1038/ncomms6758
Not Applicable / 20 µg/ml	A-21244 was used in immunohistochemistry to examine LYVE-1 expression in corneal lymphatics.
Not Applicable / 20 µg/ml	FASEB journal : official publication of the Federation of American Societies for Experimental Biology (Feb 2012; 26: 808) "Discontinuous LYVE-1 expression in corneal limbal lymphatics: dual function as microvalves and immunological hot spots." Author(s):Nakao S,Zandi S,Faez S,Kohno R,Hafezi-Moghadam A PubMed Article URL: http://dx.doi.org/10.1096/fj.11-183897

2 Immunohistochemistry - Free Floating References

Species / Dilution	Summary
	A21244 was used in immunohistochemistry - free floating to report that aggregation-induced increases in phosphatase-activating domain exposure and oligomerization are common features among all tau isoforms
Not Applicable / 1:500	Neurobiology of aging (Nov 2016; 47: 113) "Analysis of isoform-specific tau aggregates suggests a common toxic mechanism involving similar pathological conformations and axonal transport inhibition." Author(s):Cox K,Combs B,Abdelmesih B,Morfini G,Brady ST,Kanaan NM PubMed Article URL: http://dx.doi.org/10.1016/j.neurobiolaging.2016.07.015

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

	A21244 was used in immunohistochemistry - free floating to test if anti-Nogo-A treatment increases hippocampal neurogenesis after stroke
Not Applicable / 1:1000	Frontiers in neuroscience (Aug 2017; 10: null) "Anti-Nogo-A Immunotherapy Does Not Alter Hippocampal Neurogenesis after Stroke in Adult Rats." Author(s):Shepherd DJ,Tsai SY,O'Brien TE,Farrer RG,Kartje GL PubMed Article URL: http://dx.doi.org/10.3389/fnins.2016.00467

7 Immunocytochemistry References

Species / Dilution	Summary
	A21244 was used in immunocytochemistry to optimize the generation of murine cardiomyocytes from pluripotent stem cells
Not Applicable / 1:1000	Stem cell reviews (Dec 2016; 12: 731) "Simple Monolayer Differentiation of Murine Cardiomyocytes via Nutrient Deprivation-Mediated Activation of - Catenin." Author(s):Hofbauer P,Jung JP,McArdle TJ,Ogle BM PubMed Article URL: http://dx.doi.org/10.1007/s12015-016-9678-0
	A-21244 was used in immunocytochemistry to describe a role for APRIN in homologous recombination
Not Applicable / 1:1000	Nucleic acids research (Dec 2016; 44: 10879) "Roles for APRIN (PDS5B) in homologous recombination and in ovarian cancer prediction." Author(s):Couturier AM,Fleury H,Patenaude AM,Bentley VL,Rodrigue A,Coulombe Y,Niraj J,Pauty J,Berman JN,Dellaire G,Di Noia JM,Mes-Masson AM,Masson JY PubMed Article URL: http://dx.doi.org/10.1093/nar/gkw921
	A21244 was used in immunocytochemistry to analyze the proteomic profile of synaptic clefts
Not Applicable / Not Cited	Cell (Aug 2016; 166: 1295) "Proteomic Analysis of Unbounded Cellular Compartments: Synaptic Clefts." Author(s):Loh KH,Stawski PS,Draycott AS,Udeshi ND,Lehrman EK,Wilton DK,Svinkina T,Deerinck TJ,Ellisman MH,Stevens B, Carr SA,Ting AY PubMed Article URL: http://dx.doi.org/10.1016/j.cell.2016.07.041
	A21244 was used in immunocytochemistry to generate cell line to examine the molecular events controlling HIV expression in the microglia
Not Applicable / Not Cited	Journal of neurovirology (Feb 2017; 23: 47) "Immortalization of primary microglia: a new platform to study HIV regulation in the central nervous system." Author(s):Garcia-Mesa Y,Jay TR,Checkley MA,Luttge B,Dobrowolski C,Valadkhan S,Landreth GE,Karn J,Alvarez-Carbonell D PubMed Article URL: http://dx.doi.org/10.1007/s13365-016-0499-3
	A-21244 was used in immunocytochemistry to propose using three-dimensional collagen scaffolds to study anti-glioma therapeutics
Not Applicable / Not Cited	Oncotarget (Aug 2016; 7: 56904) "A three-dimensional collagen scaffold cell culture system for screening anti-glioma therapeutics." Author(s):Lv D,Yu SC,Ping YF,Wu H,Zhao X,Zhang H,Cui Y,Chen B,Zhang X,Dai J,Bian XW,Yao XH PubMed Article URL: http://dx.doi.org/10.18632/oncotarget.10885
	A21244 was used in immunocytochemistry to find that Legionella pneumophila has evolved to modulate mechanistic target of rapamycin-dependent lipogenesis in order to replicate
Not Applicable / Not Cited	PLoS pathogens (Dec 2016; 12: null) "MTOR-Driven Metabolic Reprogramming Regulates Legionella pneumophila Intracellular Niche Homeostasis." Author(s):Abshire CF,Dragoi AM,Roy CR,Ivanov SS PubMed Article URL: http://dx.doi.org/10.1371/journal.ppat.1006088
	A21244 was used in immunocytochemistry to show that LAMP-2 is essential for STX17 expression and for fusion of autophagosomes with lysosomes
Not Applicable / Not Cited	Biology open (Oct 2016; 5: 1516) "LAMP-2 is required for incorporating syntaxin-17 into autophagosomes and for their fusion with lysosomes." Author(s):Hubert V,Peschel A,Langer B,Gröger M,Rees A,Kain R PubMed Article URL: http://dx.doi.org/10.1242/bio.018648

1 Immunohistochemistry (Frozen) References

Species / Dilution	Summary
--------------------	---------

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

	A21244 was used in immunohistochemistry - frozen section to investigate how swelling and the extracellular matrix affect intratumoral stresses
Not Applicable / 1:800	Neoplasia (New York, N.Y.) (Dec 2016; 18: 732) "Hyaluronan-Derived Swelling of Solid Tumors, the Contribution of Collagen and Cancer Cells, and Implications for Cancer Therapy." Author(s):Voutouri C,Polydoru C,Papageorgis P,Gkretsi V,Stylianopoulos T PubMed Article URL: http://dx.doi.org/10.1016/j.neo.2016.10.001
2 Western Blot References	
	Species / Dilution
	Summary
	A21244 was used in western blot to test if mitochondrial calcium uniporter concentrated at the mitochondria-sarcoplasmic reticulum interface promotes calcium transfer
Not Applicable / 1:200	The Journal of biological chemistry (Oct 2016; 291: 23343) "Strategic Positioning and Biased Activity of the Mitochondrial Calcium Uniporter in Cardiac Muscle." Author(s):De La Fuente S,Fernandez-Sanz C,Vail C,Agra EJ,Holmstrom K,Sun J,Mishra J,Williams D,Finkel T,Murphy E, Joseph SK,Sheu SS,Csordás G PubMed Article URL: http://dx.doi.org/10.1074/jbc.M116.755496
Not Applicable / 1:1000	A-21244 was used in western blot to test if targeting tropomyosin receptor kinase B reduces radiation-induced cognitive deficits Experimental neurology (May 2016; 279: 178) "Cognitive impairments following cranial irradiation can be mitigated by treatment with a tropomyosin receptor kinase B agonist." Author(s):Yang P,Leu D,Ye K,Srinivasan C,Fike JR,Huang TT PubMed Article URL: http://dx.doi.org/10.1016/j.expneurol.2016.02.021
39 Miscellaneous PubMed References	
	Species / Dilution
	Summary
Not Applicable / Not Cited	Journal of the American Chemical Society (Apr 2009; 131: 4967) "Robust fluorescent detection of protein fatty-acylation with chemical reporters." Author(s):Charron G,Zhang MM,Yount JS,Wilson J,Raghavan AS,Shamir E,Hang HC PubMed Article URL: http://dx.doi.org/10.1021/ja810122f
Not Applicable / Not Cited	EMBO molecular medicine (Aug 2011; 3: 451) "Combined genomic and phenotype screening reveals secretory factor SPINK1 as an invasion and survival factor associated with patient prognosis in breast cancer." Author(s):Soon WW,Miller LD,Black MA,Dalmaso C,Chan XB,Pang B,Ong CW,Salto-Tellez M,Desai KV,Liu ET PubMed Article URL: http://dx.doi.org/10.1002/emmm.201100150
Not Applicable / Not Cited	PloS one (Mar 2011; 6: null) "High-content, high-throughput analysis of cell cycle perturbations induced by the HSP90 inhibitor XL888." Author(s):Lyman SK,Crawley SC,Gong R,Adamkewicz JI,McGrath G,Chew JY,Choi J,Holst CR,Goon LH,Detmer SA, Vaclavikova J,Gerritsen ME,Blake RA PubMed Article URL: http://dx.doi.org/10.1371/journal.pone.0017692
Not Applicable / Not Cited	BioTechniques (Feb 2006; 40: 220) "Direct production and purification of T7 phage display cloned proteins selected and analyzed on microarrays." Author(s):Nowak JE,Chatterjee M,Mohapatra S,Dryden SC,Tainsky MA PubMed Article URL: http://dx.doi.org/null
Not Applicable / Not Cited	Stem cells (Dayton, Ohio) (Jul 2007; 25: 1779) "Isolation, characterization, and differentiation to hepatocyte-like cells of nonparenchymal epithelial cells from adult human liver." Author(s):Duret C,Gerbal-Chaloin S,Ramos J,Fabre JM,Jacquet E,Navarro F,Blanc P,Sa-Cunha A,Maurel P,Daujat-Chavanieu M PubMed Article URL: http://dx.doi.org/10.1634/stemcells.2006-0664
Not Applicable / Not Cited	Proceedings of the National Academy of Sciences of the United States of America (Dec 2011; 108: 21081) "Bleaching/blinking assisted localization microscopy for superresolution imaging using standard fluorescent molecules." Author(s):Burnette DT,Sengupta P,Dai Y,Lippincott-Schwartz J,Kachar B PubMed Article URL: http://dx.doi.org/10.1073/pnas.1117430109
Not Applicable / Not Cited	The Journal of biological chemistry (May 2010; 285: 16424) "Features of a spatially constrained cystine loop in the p10 FAST protein ectodomain define a new class of viral fusion peptides." Author(s):Barry C,Key T,Haddad R,Duncan R PubMed Article URL: http://dx.doi.org/10.1074/jbc.M110.118232

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

Not Applicable / Not Cited	Neuron (Apr 2007; 54: 205) "In vivo light-induced activation of neural circuitry in transgenic mice expressing channelrhodopsin-2." Author(s):Arenkiel BR,Peca J,Davison IG,Feliciano C,Deisseroth K,Augustine GJ,Ehlers MD,Feng G PubMed Article URL: http://dx.doi.org/10.1016/j.neuron.2007.03.005
Not Applicable / Not Cited	Proceedings of the National Academy of Sciences of the United States of America (Feb 2006; 103: 2512) "A macroporous hydrogel for the coculture of neural progenitor and endothelial cells to form functional vascular networks in vivo." Author(s):Ford MC,Bertram JP,Hynes SR,Michaud M,Li Q,Young M,Segal SS,Madri JA,Lavik EB PubMed Article URL: http://dx.doi.org/10.1073/pnas.0506020102
Not Applicable / Not Cited	Journal of proteome research (Jul 2006; 5: 1568) "Microfluidic analysis of antibody specificity in a compact disk format." Author(s):Eriksson C,Agaton C,Känge R,Sundberg M,Nilsson P,Ek B,Uhlén M,Gustafsson M,Hober S PubMed Article URL: http://dx.doi.org/10.1021/pr050447c
Not Applicable / Not Cited	The Journal of cell biology (Mar 2013; 200: 589) "Promoter- and RNA polymerase II-dependent hsp-16 gene association with nuclear pores in Caenorhabditis elegans." Author(s):Rohner S,Kalck V,Wang X,Ikegami K,Lieb JD,Gasser SM,Meister P PubMed Article URL: http://dx.doi.org/10.1083/jcb.201207024
Not Applicable / Not Cited	Laboratory investigation; a journal of technical methods and pathology (Oct 2007; 87: 1042) "Invasive Escherichia coli are a feature of Crohn's disease." Author(s):Sasaki M,Sitaraman SV,Babbitt BA,Gerner-Smidt P,Ribot EM,Garrett N,Alpern JA,Akyildiz A,Theiss AL,Nusrat A, Klapproth JM PubMed Article URL: http://dx.doi.org/10.1038/labinvest.3700661
Not Applicable / Not Cited	Science (New York, N.Y.) (Mar 2007; 315: 1687) "Asymmetric T lymphocyte division in the initiation of adaptive immune responses." Author(s):Chang JT,Palanivel VR,Kinjo I,Schambach F,Intlekofer AM,Banerjee A,Longworth SA,Vinup KE,Mrass P,Oliaro J, Killeen N,Orange JS,Russell SM,Weninger W,Reiner SL PubMed Article URL: http://dx.doi.org/10.1126/science.1139393
Not Applicable / Not Cited	The Journal of biological chemistry (Sep 2008; 283: 24584) "Niemann-Pick C1 functions in regulating lysosomal amine content." Author(s):Kaufmann AM,Krise JP PubMed Article URL: http://dx.doi.org/10.1074/jbc.M803715200
Not Applicable / Not Cited	Neuron (May 2007; 54: 447) "Diffusional trapping of GluR1 AMPA receptors by input-specific synaptic activity." Author(s):Ehlers MD,Heine M,Groc L,Lee MC,Choquet D PubMed Article URL: http://dx.doi.org/10.1016/j.neuron.2007.04.010
Not Applicable / Not Cited	Journal of bacteriology (Jun 2007; 189: 4473) "Distribution of protein A on the surface of Staphylococcus aureus." Author(s):DeDent AC,McAdow M,Schneewind O PubMed Article URL: http://dx.doi.org/10.1128/JB.00227-07
Not Applicable / Not Cited	The Journal of neuroscience : the official journal of the Society for Neuroscience (Feb 2007; 27: 1836) "Self-renewing and differentiating properties of cortical neural stem cells are selectively regulated by basic fibroblast growth factor (FGF) signaling via specific FGF receptors." Author(s):Maric D,Fiorio Pla A,Chang YH,Barker JL PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.5141-06.2007
Not Applicable / Not Cited	The Journal of neuroscience : the official journal of the Society for Neuroscience (May 2008; 28: 4878) "Dicer inactivation leads to progressive functional and structural degeneration of the mouse retina." Author(s):Damiani D,Alexander JJ,O'Rourke JR,McManus M,Jadhav AP,Cepko CL,Hauswirth WW,Harfe BD,Strettoi E PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.0828-08.2008
Not Applicable / Not Cited	The Journal of biological chemistry (Mar 2003; 278: 8725) "HIV-1 Nef stabilizes the association of adaptor protein complexes with membranes." Author(s):Janvier K,Craig H,Hitchin D,Madrid R,Sol-Foulon N,Renault L,Cherfils J,Cassel D,Benichou S,Guatelli J PubMed Article URL: http://dx.doi.org/10.1074/jbc.M210115200
Not Applicable / Not Cited	The Journal of neuroscience : the official journal of the Society for Neuroscience (Sep 2008; 28: 9002) "Endophilin B1 as a novel regulator of nerve growth factor/ TrkA trafficking and neurite outgrowth." Author(s):Wan J,Cheung AY,Fu WY,Wu C,Zhang M,Mobley WC,Cheung ZH,Ip NY PubMed Article URL: http://dx.doi.org/10.1523/JNEUROSCI.0767-08.2008

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

Not Applicable / Not Cited	<p>The European journal of neuroscience (Jan 2009; 29: 114) "Involvement of mitochondrial signaling pathways in the mechanism of Fas-mediated apoptosis after spinal cord injury." Author(s):Yu WR,Liu T,Fehlings TK,Fehlings MG PubMed Article URL:http://dx.doi.org/10.1111/j.1460-9568.2008.06555.x</p>
Not Applicable / Not Cited	<p>The Journal of biological chemistry (Mar 2013; 288: 6743) "LY228820 dimesylate, a selective inhibitor of p38 mitogen-activated protein kinase, reduces angiogenic endothelial cord formation in vitro and in vivo." Author(s):Tate CM,Blosser W,Wyss L,Evans G,Xue Q,Pan Y,Stancato L PubMed Article URL:http://dx.doi.org/10.1074/jbc.M112.425553</p>
Not Applicable / Not Cited	<p>Proceedings of the National Academy of Sciences of the United States of America (Dec 2005; 102: 18854) "The identification and characterization of two phosphatidylinositol-4,5-bisphosphate 4-phosphatases." Author(s):Ungewickell A,Hugge C,Kisseleva M,Chang SC,Zou J,Feng Y,Galyov EE,Wilson M,Majerus PW PubMed Article URL:http://dx.doi.org/10.1073/pnas.0509740102</p>
Not Applicable / Not Cited	<p>Journal of virology (Jul 2004; 78: 7186) "Receptor (CD155)-dependent endocytosis of poliovirus and retrograde axonal transport of the endosome." Author(s):Ohka S,Matsuda N,Tohyama K,Oda T,Morikawa M,Kuge S,Nomoto A PubMed Article URL:http://dx.doi.org/10.1128/JVI.78.13.7186-7198.2004</p>
Not Applicable / Not Cited	<p>Proceedings of the National Academy of Sciences of the United States of America (Sep 2006; 103: 13807) "Pregnane X receptor (PXR) activation: a mechanism for neuroprotection in a mouse model of Niemann-Pick C disease." Author(s):Langmade SJ,Gale SE,Frolov A,Mohri I,Suzuki K,Mellon SH,Walkley SU,Covey DF,Schaffer JE,Ory DS PubMed Article URL:http://dx.doi.org/10.1073/pnas.0606218103</p>
Not Applicable / Not Cited	<p>Journal of immunology (Baltimore, Md. : 1950) (Jan 2004; 172: 418) "Localization of cystic fibrosis transmembrane conductance regulator to lipid rafts of epithelial cells is required for Pseudomonas aeruginosa-induced cellular activation." Author(s):Kowalski MP,Pier GB PubMed Article URL:http://dx.doi.org/null</p>
Not Applicable / Not Cited	<p>Nature immunology (Aug 2008; 9: 857) "The NALP3 inflammasome is involved in the innate immune response to amyloid-beta." Author(s):Halle A,Hornung V,Petzold GC,Stewart CR,Monks BG,Reinheckel T,Fitzgerald KA,Latz E,Moore KJ,Golenbock DT PubMed Article URL:http://dx.doi.org/10.1038/ni.1636</p>
Not Applicable / Not Cited	<p>Journal of biomolecular screening (Sep 2007; 12: 775) "High-content imaging analysis of the knockdown effects of validated siRNAs and antisense oligonucleotides." Author(s):Low J,Dowless M,Blosser W,Vincent T,Davis S,Hodson J,Koller E,Marcusson E,Blanchard K,Stancato L PubMed Article URL:http://dx.doi.org/10.1177/1087057107302675</p>
Not Applicable / Not Cited	<p>Molecular immunology (Feb 2009; 46: 793) "Endosomal trafficking of the ligated FcγεRI receptor." Author(s):Fattakhova GV,Masilamani M,Narayanan S,Borrego F,Gilfillan AM,Metcalfe DD,Coligan JE PubMed Article URL:http://dx.doi.org/10.1016/j.molimm.2008.09.002</p>
Not Applicable / Not Cited	<p>The Journal of biological chemistry (Sep 2005; 280: 33637) "The anti-apoptotic protein Mcl-1 inhibits mitochondrial Ca²⁺ signals." Author(s):Minagawa N,Kruglov EA,Dranoff JA,Robert ME,Gores GJ,Nathanson MH PubMed Article URL:http://dx.doi.org/10.1074/jbc.M503210200</p>
Not Applicable / Not Cited	<p>Molecular cancer therapeutics (Nov 2008; 7: 3490) "Identification of a nonkinase target mediating cytotoxicity of novel kinase inhibitors." Author(s):Ross-Macdonald P,de Silva H,Guo Q,Xiao H,Hung CY,Penhallow B,Markwalder J,He L,Attar RM,Lin TA,Seitz S,Tilford C,Wardwell-Swanson J,Jackson D PubMed Article URL:http://dx.doi.org/10.1158/1535-7163.MCT-08-0826</p>
Not Applicable / Not Cited	<p>Journal of virology (Oct 2008; 82: 9477) "The transmembrane domain of the severe acute respiratory syndrome coronavirus ORF7b protein is necessary and sufficient for its retention in the Golgi complex." Author(s):Schaecher SR,Diamond MS,Pekosz A PubMed Article URL:http://dx.doi.org/10.1128/JVI.00784-08</p>
Not Applicable / Not Cited	<p>Stem cells (Dayton, Ohio) (Mar 2007; 25: 697) "The contribution of bone marrow-derived cells to the development of renal interstitial fibrosis." Author(s):Li J,Deane JA,Campanale NV,Bertram JF,Ricardo SD PubMed Article URL:http://dx.doi.org/10.1634/stemcells.2006-0133</p>

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.

Not Applicable / Not Cited	Science (New York, N.Y.) (Mar 2010; 327: 1380) "Restriction of receptor movement alters cellular response: physical force sensing by EphA2." Author(s):Salaita K,Nair PM,Petit RS,Neve RM,Das D,Gray JW,Groves JT PubMed Article URL: http://dx.doi.org/10.1126/science.1181729
Not Applicable / Not Cited	The Journal of biological chemistry (Sep 2006; 281: 29297) "Gamma-adaptin, a novel ubiquitin-interacting adaptor, and Nedd4 ubiquitin ligase control hepatitis B virus maturation." Author(s):Rost M,Mann S,Lambert C,Döring T,Thomé N,Prange R PubMed Article URL: http://dx.doi.org/10.1074/jbc.M603517200
Not Applicable / Not Cited	The Journal of biological chemistry (Feb 2011; 286: 4854) "Surfactant protein A (SP-A)-mediated clearance of Staphylococcus aureus involves binding of SP-A to the staphylococcal adhesin eap and the macrophage receptors SP-A receptor 210 and scavenger receptor class A." Author(s):Sever-Chroneos Z,Krupa A,Davis J,Hasan M,Yang CH,Szeliga J,Herrmann M,Hussain M,Geisbrecht BV,Kobzik L,Chroneos ZC PubMed Article URL: http://dx.doi.org/10.1074/jbc.M110.125567
Not Applicable / Not Cited	The Journal of biological chemistry (Mar 2008; 283: 6476) "Caveolin regulates endocytosis of the muscle repair protein, dysferlin." Author(s):Hernández-Deviez DJ,Howes MT,Laval SH,Bushby K,Hancock JF,Parton RG PubMed Article URL: http://dx.doi.org/10.1074/jbc.M708776200
Not Applicable / Not Cited	Pflugers Archiv : European journal of physiology (Aug 2003; 446: 553) "A novel approach to in situ characterization of pancreatic beta-cells." Author(s):Speier S,Rupnik M PubMed Article URL: http://dx.doi.org/10.1007/s00424-003-1097-9
Not Applicable / Not Cited	Journal of neurochemistry (Nov 2003; 87: 958) "Caspase activation contributes to delayed death of heat-stressed striatal neurons." Author(s):White MG,Emery M,Nonner D,Barrett JN PubMed Article URL: http://dx.doi.org/null

2 Flow Cytometry References

Species / Dilution	Summary
	A-21244 was used in flow cytometry to test if IL-1beta and TNF-alpha are synthesized by overlapping or segregated populations of cells after ischemic stroke in mice
Not Applicable / Not Cited	Journal of neuroinflammation (Oct 2008; 5: null) "Interleukin-1beta and tumor necrosis factor-alpha are expressed by different subsets of microglia and macrophages after ischemic stroke in mice." Author(s):Clausen BH,Lambertsen KL,Babcock AA,Holm TH,Dagnaes-Hansen F,Finsen B PubMed Article URL: http://dx.doi.org/10.1186/1742-2094-5-46
	A-21244 was used in flow cytometry to analyze the effects of a HSP90 inhibitor, NVP-HSP990, on multiple myeloma cell proliferation and survival
Not Applicable / Not Cited	European journal of haematology (May 2012; 88: 406) "The novel, orally bioavailable HSP90 inhibitor NVP-HSP990 induces cell cycle arrest and apoptosis in multiple myeloma cells and acts synergistically with melphalan by increased cleavage of caspases." Author(s):Lamottke B,Kaiser M,Mieth M,Heider U,Gao Z,Nikolova Z,Jensen MR,Sterz J,von Metzler I,Sezer O PubMed Article URL: http://dx.doi.org/10.1111/j.1600-0609.2012.01764.x

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (i) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (ii) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (iii) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (iv) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.