

Datasheet for 609-142-123**Human IgG (H&L) Antibody DyLight™ 549 Conjugated Pre-Adsorbed****Overview**

Description:	Goat Anti-Human IgG (H&L) Antibody DyLight™ 549 Conjugated (Min X Bv Ch Gt GP Ham Hs Ms Rb Rt & Sh Serum Proteins) - 609-142-123
Item No.:	609-142-123
Size:	100 µg
Applications:	Dot Blot, ELISA, WB
Reactivity:	Human
Host Species:	Goat

Product Details

Background:	Anti-Human IgG (H&L) DyLight 549 generated in goat detects human Immunoglobulin G (IgG), both heavy and light chains of the antibody molecule are present. It is a protein complex composed of four peptide chains — two identical heavy chains and two identical light chains arranged in a Y-shape typical of antibody monomers. Each IgG has two antigen binding sites. Representing approximately 75% of serum immunoglobulins in humans, IgG is the most abundant antibody isotype found in the circulation. IgG molecules are synthesized and secreted by plasma B cells. Secondary Antibodies are available in a variety of formats and conjugate types. When choosing a secondary antibody product, consideration must be given to species and immunoglobulin specificity, conjugate type, fragment and chain specificity, level of cross-reactivity, and host-species source and fragment composition.
Synonyms:	Goat Anti Human IgG DyLight 549™ Conjugated Antibody, Goat Anti-Human IgG Antibody DyLight 549™ conjugation
Host Species:	Goat
Specificity:	IgG (H&L)
Conjugate:	DyLight™ 549
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	4.9

Target Details

Reactivity:	Human
Immunogen:	Human IgG whole molecule
Purity/Specificity:	This product was prepared from monospecific antiserum by immunoaffinity chromatography using Human IgG coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Goat Serum, Human IgG and Human Serum. No reaction was observed against Bovine, Chicken, Goat, Guinea Pig, Hamster, Horse, Mouse, Rabbit, Rat and Sheep Serum Proteins. This antibody will react with heavy chains of Human IgG and with light chains of most Human immunoglobulins.

Application Details

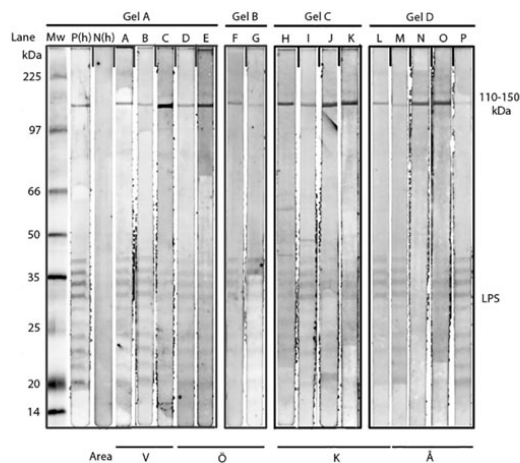
Tested Applications:	Dot Blot, ELISA
Suggested Applications:	WB (Based on references)
Application Note:	Anti-Human IgG (H&L) DyLight 549 has been tested by ELISA and dot blot and is designed for immunofluorescence microscopy, fluorescence based plate assays (FLISA) and fluorescent western blotting. This product is also suitable for multiplex analysis, including multicolor imaging, utilizing various commercial platforms. The emission spectra for this DyLight™ conjugate match the principle output wavelengths of most common fluorescence instrumentation.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
FLISA:	>1:20,000
IF:	>1:5,000
WB:	>1:10,000

Formulation

Physical State:	Lyophilized
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free

Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)
Shipping & Handling	
Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

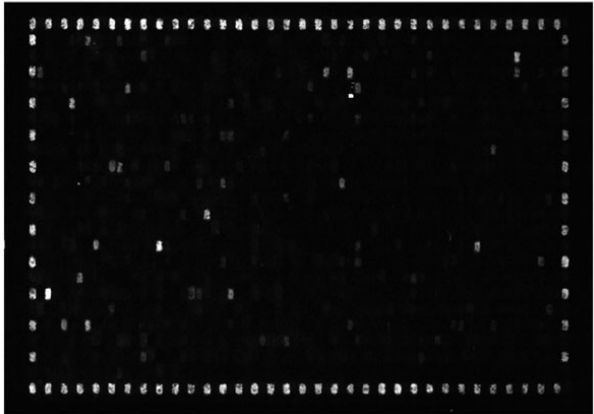
Images



Western Blot

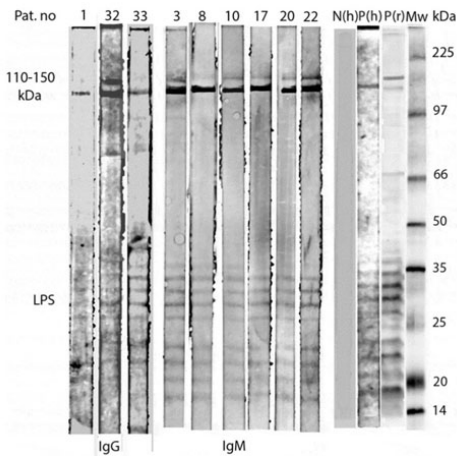
Western Blot analysis of IgG antibodies against *R. helvetica* whole cell antigen. Lane A-P demonstrates the lipopolysaccharide ladders and specific reactions against *R. helvetica* proteins in the 110-150-kDa region for serum 2 for patients (Lane V16(A), V43(B), V46 (C)(Area V); S71(D), S72(E), S75(F), V6(G) (Area Ö); K7(H), K9(I), K14(J), K46(K) K56(L) (Area K); Å13(M), Å16(N), Å23(O), Å35(P) (Area Å) in titres 1:200. Lane P(h) demonstrates specific proteins and the lipopolysaccharide (LPS) ladders reacting with a human antiserum from a patient diagnosed with rickettsial infection and N(h) a healthy negative blood donor. Mw = molecular weight marker. “Fig 2” is compiled of four figure panels representing the groups of lanes that originated from different gels/blots (Gel A-D). The short vertical lines of “Fig 2” divide the individual non-adjacent lanes in the gels. The original analyses are presented in S1–S4 Figs with Gels A-D as Supporting Information. Fig 2. PMID: 27846275.

Example of stained microarray



Figure

702 Peptides are printed in duplicates randomly distributed on the microarray. Control peptides (HA and FLAG controls) are located in a square surrounding the peptides of interest. As secondary antibody DyLight™ 549 conjugated goat anti-human IgG antibody and for the FLAG control peptide a mouse anti-FLAG-Cy3 antibody were used; microarrays were read using a Fujifilm Life Science FLA-5100 imaging system with a SHG 532nm (green) diode laser and an LPG filter. Fig e1. PMID: 26894206.



Western Blot

Western Blot analysis of IgG and IgM antibodies against *R. helvetica* whole cell antigen demonstrates the lipopolysaccharide (LPS) ladders and specific reactions against *R. helvetica* proteins in the 110–150-kDa region in serum for IgG for patients 1, 32 and 33 and for IgM for patients 3, 8, 10, 17, 20 and 22 in dilution 1:200. Lane P(h) demonstrates specific proteins and the LPS ladders reacting with a positive human serum and P(r) with a polyclonal rabbit antiserum. N(h) represent a negative human serum control. Secondary antibody Anti-human IgG DyLight™ 549 (p/n 609–142-123) and Anti-human IgM DyLight™ 549 (p/n 609–142-007). Figure 1. PMID: 34712390.

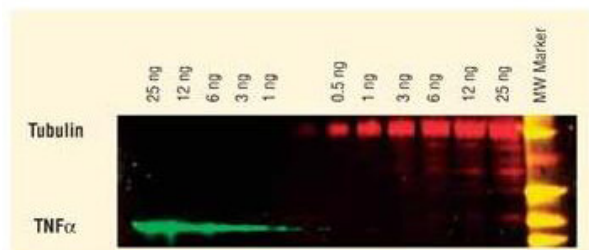
Diagram

Properties of DyLight™ Conjugates.

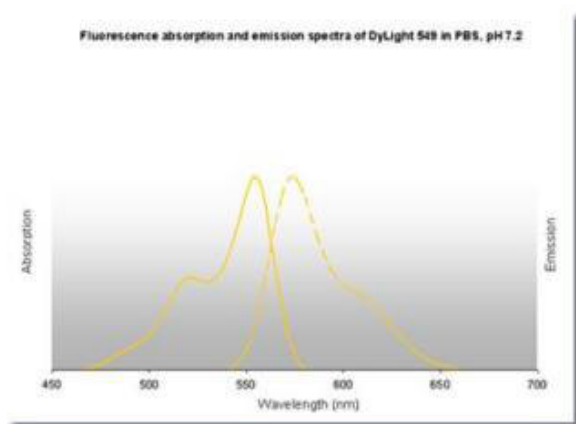
Emission	Color	DyLight™ Dye	Ex/Em (nm)	ϵ (M ⁻¹ cm ⁻¹)	Similar Dyes
Blue		405	400/420	30,000	Alexa™ 405, Cascade Blue
Green		488	493/518	70,000	Alexa™ 488, Cy2®, FITC
Yellow		549	550/568	150,000	Alexa™ 546, Alexa 555, Cy3®, TRITC
Red		649	646/674	250,000	Alexa™ 647, Cy5®
Near Infrared		680	682/715	140,000	Alexa™ 680, Cy5.5®, IRDye™ 700
Infrared		800	770/794	270,000	IRDye™ 800

Western Blot

DyLight™ dyes can be used for two-color western blot detection with low background and high signal. Anti-tubulin was detected using a DyLight™ 549 conjugate. Anti-TNFα was detected using a DyLight™ 649 conjugate. The image was captured using the Typhoon™ 9410 Imaging System.



Diagram



References

- Wallmenius K et al. Retrospective serological study of Rickettsia spp. and Borrelia spp. antibodies in patients with peripheral facial nerve palsy. *Infect Ecol Epidemiol.* (2021)
- Stork, L et al. Antibody signatures in patients with histopathologically defined multiple sclerosis patterns. *Acta Neuropathologica* (2020)
- Lindblom et al. Prevalence of Rickettsia spp. in Ticks and Serological and Clinical Outcomes in Tick-Bitten Individuals in Sweden and on the Åland Islands. *PLOS One* (2016)
- Metz I, Beißbarth T, Ellenberger D, et al. Serum peptide reactivities may distinguish neuromyelitis optica subgroups and multiple sclerosis. *Neurol Neuroimmunol Neuroinflamm.* (2016)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.