

Datasheet for 609-142-002

Human IgG (H&L) Antibody DyLight™ 549 Conjugated

Overview

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| Description: | Goat Anti-Human IgG (H&L) Antibody DyLight™ 549 Conjugated - 609-142-002 |
| Item No.: | 609-142-002 |
| Size: | 100 µg |
| Applications: | WB, Microarray |
| Reactivity: | Human |
| Host Species: | Goat |

Product Details

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| 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: | 2.8 |

Target Details

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| 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 conjugation to fluorochrome and extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Goat Serum, Human IgG and Human Serum. This antibody will react with heavy chains of Human IgG and with light chains of most Human immunoglobulins. |

Application Details

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| Tested Applications: | WB |
| Suggested Applications: | Microarray (Based on references) |
| Application Note: | Anti-Human IgG (H&L) DyLight 549 has been tested by western 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 |

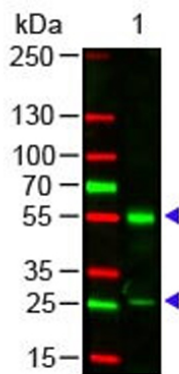
Formulation

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| 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

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| 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 of Goat anti-Human IgG Antibody DyLight™ 549 Conjugated.

Lane 1: Human IgG.

Load: 50 ng per lane.

Secondary antibody: Human IgG (H&L) Antibody DyLight™ 549 Conjugated at 1:1,000 for 60 min at RT.

Block: MB-070 for 30 min at RT.







Predicted/Observed size: 55 and 28 kDa.

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.

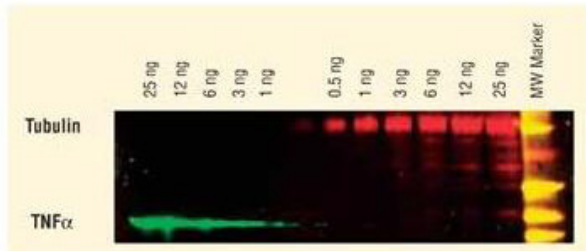
| Emission | Color | DyLight™ Dye | Ex/Em (nm) | ϵ ($M^{-1} cm^{-1}$) | Similar Dyes |
|---------------|---|--------------|------------|---------------------------------|------------------------------------|
| Blue |  | 405 | 400/420 | 30,000 | Alexa™ 405, Cascade Blue |
| Green |  | 488 | 493/518 | 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 |

Diagram

Properties of DyLight™ Fluorescent Dyes.

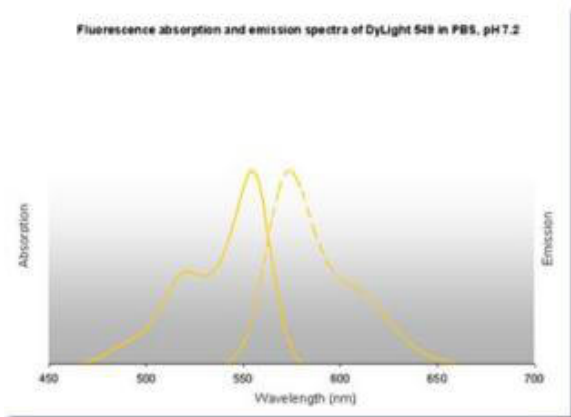
Western Blot

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-TNF α was detected using a DyLight™ 649 conjugate. The image was captured using the Typhoon™ 9410 Imaging System.



Diagram

DyLight™ 549 Fluorescence Spectra.



References

- Stork, L et al. Antibody signatures in patients with histopathologically defined multiple sclerosis patterns. *Acta Neuropathologica* (2020)
- 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.