

Datasheet for 610-744-002

Mouse IgG (H&L) Antibody DyLight™ 680 Conjugated

Overview

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| Description: | Donkey Anti-Mouse IgG (H&L) Antibody DyLight™ 680 Conjugated - 610-744-002 |
| Item No.: | 610-744-002 |
| Size: | 100 µg |
| Applications: | IF, WB |
| Reactivity: | Mouse |
| Host Species: | Donkey |

Product Details

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| Background: | Anti-Mouse IgG DyLight680 Antibody generated in donkey detects reactivity to Mouse IgG. Secreted as part of the adaptive immune response by plasma B cells, immunoglobulin G constitutes 75% of serum immunoglobulins. Immunoglobulin G binds to viruses, bacteria, as well as fungi and facilitates their destruction or neutralization via agglutination (and thereby immobilizing them), activation of the compliment cascade, and opsonization for phagocytosis. The whole IgG molecule possesses both the F(c) region, recognized by high-affinity Fc receptor proteins, as well as the F(ab) region possessing the epitope-recognition site. Both the Heavy and Light chains of the antibody molecule are present. 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: | Donkey anti-Mouse IgG DyLight 680™ Conjugated Antibody, Donkey anti Mouse IgG Antibody DyLight 680™ Conjugation |
| Host Species: | Donkey |
| Specificity: | IgG (H&L) |
| Conjugate: | DyLight™ 680 |
| Clonality: | Polyclonal |
| Format: | IgG |
| F/P Ratio: | 2.1 |

Target Details

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| Reactivity: | Mouse |
| Immunogen: | Mouse IgG whole molecule |
| Purity/Specificity: | This product was prepared from monospecific antiserum by immunoaffinity chromatography using Mouse 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-Donkey Serum, Mouse IgG and Mouse Serum. This antibody will react with heavy chains of Mouse IgG and with light chains of most Mouse immunoglobulins. |

Application Details

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| Suggested Applications: | IF, WB (Based on references) |
| Application Note: | This product 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) |

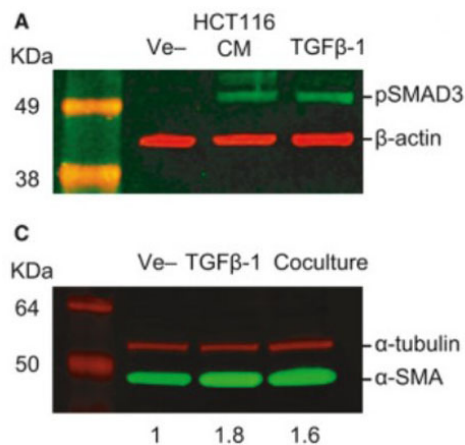
Shipping & Handling

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.

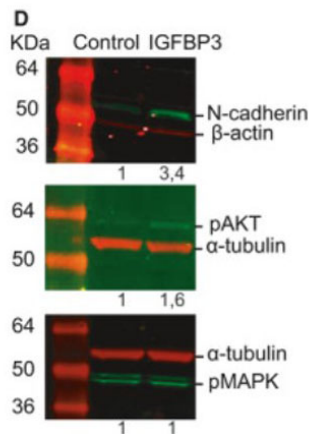
Expiration: Expiration date is one (1) year from date of receipt.

Images



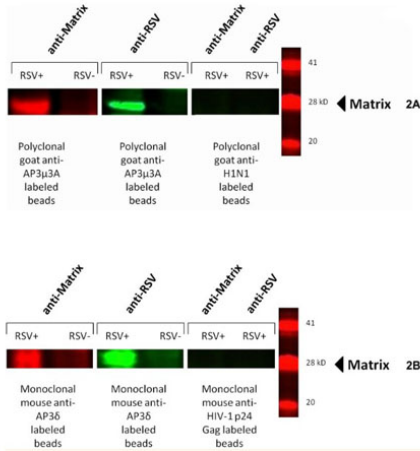
Western Blot

Western blot using Donkey Anti-Mouse IgG DyLight™680. TGF-β-mediated crosstalk between pericytes and CRC cells modulates pericyte secretome. (A) Incubation in HCT116 CM for 1 h induces SMAD3 phosphorylation in PC, as assessed by western blot. Exogenous recombinant TGF-β (10 ng·mL⁻¹) was used as a positive control, and β-actin was used as loading control (n = 3). (C) Western blot showing increased expression of αSMA in PC cocultured with HCT116 cells or stimulated with 10 ng·mL⁻¹ TGF-β1 for 48 h (n = 3). α-tubulin was used as loading control. Numbers indicate the expression fold change relative to the loading control. Fig. 5. PMID: 32767843.



Western Blot

Western blot using Donkey Anti-Mouse IgG DyLight™680. Insulin-like growth factor-binding protein 3 increases CRC cell migration and invasion through Akt activation. (D) Treatment with 50 ng·mL⁻¹ IGFBP-3 for 72 h promotes the expression of N-cadherin in HCT116 cells as assessed by western blot (top panel). Phosphorylation status of Akt (middle panel) and MAPK (bottom panel) in HCT116 cells treated with 50 ng·mL⁻¹ IGFBP-3 for 15 min. Representative images of three independent experiments (n = 3). Numbers indicate the expression fold change relative to the loading control. Fig. 7. PMID: 32767843.



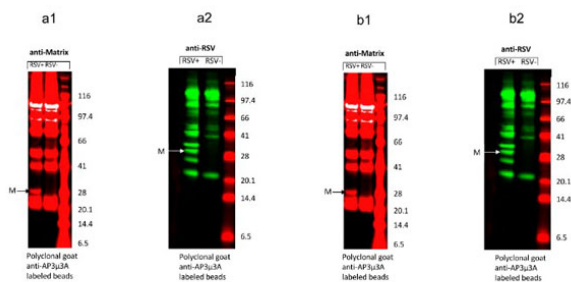
Western Blot

Western blot using Donkey Anti-Mouse IgG DyLight™680. The HRSV M protein co-immunoprecipitates with the AP-3Mu3A and AP-3delta complex during HRSV infection. HEp2 cells at approximately 90% confluency were either infected at an MOI of 5 or mock infected for 24 hours, cells were scraped or proteins were subsequently extracted using MPER. Cell lysates were incubated for 6 hours with 1 µg of either polyclonal goat anti-AP-3Mu3A or monoclonal mouse anti-AP-3delta along with a antibody specific isotype control, polyclonal goat-anti H1N1 or monoclonal mouse anti-HIV-1 p24 Gag at 4°C on a rotating device. 20µl Protein A/G agarose beads were added to lysate plus corresponding antibody and incubated overnight. Immunoprecipate complex was pelleted and washed with PBS and then ran out on a SDS-PAGE gel and transferred to nitrocellulose membrane. Membrane was blocked and then probed with either monoclonal mouse anti-Matrix or polyclonal goat-anti HRSV primary antibody as described previously for one hour. Membranes were then washed with a PBS-Tween20 solution extensively and then probed with species-specific secondary antibodies donkey anti-goat DyLight800 and donkey anti-mouse DyLight680. Membranes were again washed extensively and blots were imaged on Odyssey Infrared imager. The results were reproducible in at least two independent assays. Fig 2. PMID: 29028839.

Western Blot

The HRSV M protein co-immunoprecipitates with the AP-3Mu3A complex during HRSV infection.

a1) The HRSV M protein co-immunoprecipitates with the AP-3Mu3A complex during HRSV infection. HEp2 cells at approximately 90% confluency were either infected at an MOI of 5 or mock infected for 24 hours, cells were scraped or proteins were subsequently extracted using MPER. Cell lysates were incubated for 6 hours with 1 µg of polyclonal goat anti-AP-3Mu3A at 4°C on a rotating device. 20µl Protein A/G agarose beads were added to lysate plus corresponding antibody and incubated overnight. Immunoprecipate complex was pelleted and washed with PBS and then ran out on a SDS-PAGE gel and transferred to nitrocellulose membrane. Membrane was blocked and then probed with monoclonal mouse anti-Matrix primary antibody as described previously for one hour. Membranes were then washed with a PBS-Tween20 solution extensively and then probed with species-specific secondary antibodies donkey



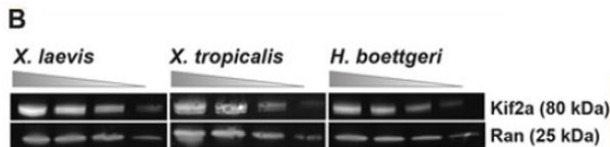
anti-mouse DyLight™680. Membranes were again washed extensively and blots were imaged on Odyssey Infrared imager. The last lane shows protein molecular weight marker (kDa). The results were reproducible in at least two independent assays. a2) The HRSV M protein co-immunoprecipitates with the AP-3Mu3A complex during HRSV infection. HEp2 cells at approximately 90% confluency were either infected at an MOI of 5 or mock infected for 24 hours, cells were scraped or proteins were subsequently extracted using MPER. Cell lysates were incubated for 6 hours with 1 µg of polyclonal goat anti-AP-3Mu3A at 4°C on a rotating device. 20µl Protein A/G agarose beads were added to lysate plus corresponding antibody and incubated overnight. Immunoprecipate complex was pelleted and washed with PBS and then ran out on a SDS-PAGE gel and transferred to nitrocellulose membrane. Membrane was blocked and then probed with polyclonal goat-anti HRSV primary antibody as described previously for one hour. Membranes were then washed with a PBS-Tween20 solution extensively and then probed with species-specific secondary antibodies donkey anti-goat DyLight™800. Membranes were again washed extensively and blots were imaged on Odyssey Infrared imager. The last lane shows protein molecular weight marker (kDa). The results were reproducible in at least two independent assays. b1) The HRSV M protein co-immunoprecipitates with the AP-3delta complex during HRSV infection. HEp2 cells at approximately 90% confluency were either infected at an MOI of 5 or mock infected for 24 hours, cells were scraped or proteins were subsequently extracted using MPER. Cell lysates were incubated for 6 hours with 1 µg of monoclonal mouse anti-AP-3delta at 4°C on a rotating device. 20µl Protein A/G agarose beads were added to lysate plus corresponding antibody and incubated overnight. Immunoprecipate complex was pelleted and washed with PBS and then ran out on a SDS-PAGE gel and transferred to nitrocellulose membrane. Membrane was blocked and then probed with monoclonal mouse anti-Matrix primary antibody as described previously for one hour. Membranes were then washed with a PBS-Tween20 solution extensively and then probed with species-specific secondary antibodies donkey anti-mouse DyLight™680. Membranes were again washed extensively and blots were imaged on Odyssey Infrared imager. The last lane shows protein molecular weight marker (kDa). The results were reproducible in at least two independent assays. b2) The HRSV M protein co-immunoprecipitates with the AP-3delta complex during HRSV infection. HEp2 cells at approximately

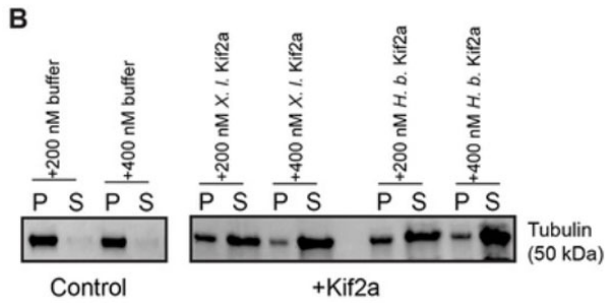
90% confluency were either infected at an MOI of 5 or mock infected for 24 hours, cells were scraped or proteins were subsequently extracted using MPER. Cell lysates were incubated for 6 hours with 1 µg of monoclonal mouse anti-AP-3delta at 4°C on a rotating device. 20µl Protein A/G agarose beads were added to lysate plus corresponding antibody and incubated overnight. Immunoprecipitate complex was pelleted and washed with PBS and then ran out on a SDS-PAGE gel and transferred to nitrocellulose membrane. Membrane was blocked and then probed with polyclonal goat-anti HRSV primary antibody as described previously for one hour. Membranes were then washed with a PBS-Tween20 solution extensively and then probed with species-specific secondary antibodies donkey anti-goat DyLight™800. Membranes were again washed extensively and blots were imaged on Odyssey Infrared imager. The last lane shows protein molecular weight marker (kDa). The results were reproducible in at least two independent assays. Fig S1. PMID: 29028839.

Western Blot

Western blot using Donkey Anti-Mouse IgG DyLight™680. Kif2a is enriched on spindles in *H. boettgeri* egg extracts, and inhibition of kif2a increases spindle length.

B. Top Right Panel: Western blot of *X. laevis*, *X. tropicalis*, and *H. boettgeri* extracts, probed for kif2a. Bottom Panel: Quantification of 3 separate blots for each species. Band intensities were normalized to the integrated density of the corresponding Ran loading control. AU=arbitrary units. Figure 3. PMID: 31630945.





Western Blot

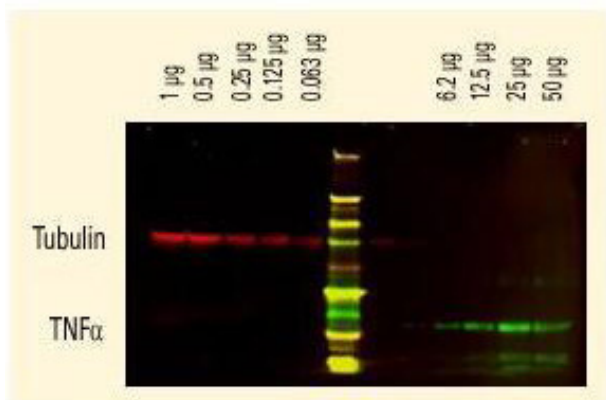
Serine 252 of kif2a regulates its activity.

B. Top Panel: Increasing amounts of recombinant X. laevis or H. boettgeri kif2a proteins were added to taxol-stabilized microtubules and microtubules sedimented through a sucrose cushion. Amounts of soluble tubulin in the supernatant (S) and pellet (P) were quantified by SDS-PAGE and Coomassie staining. Bottom Panel: Ratio of pellet to supernatant gel band intensities in the microtubule sedimentation assay with 200 nM H. boettgeri or X. laevis kif2a added. Bands from 3 separate gels quantified, p=0.2768. NS= Not Significant. Error bars= +/- std dev. Figure 4. PMID: 31630945.

Diagram

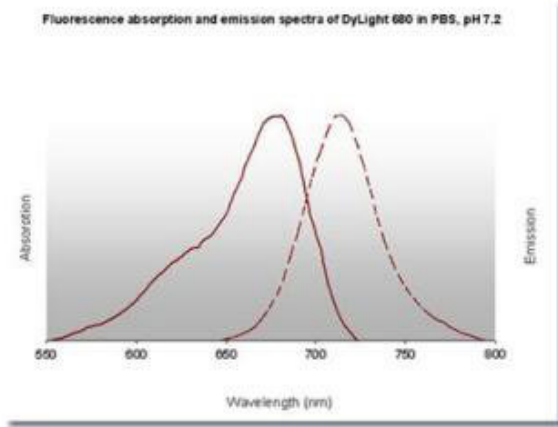
Properties of DyLight™ Conjugates.

| 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™ 680 conjugate. Anti-TNF α was detected using a DyLight™ 800 conjugate. The image was captured using the Odyssey® Infrared Imaging System developed by LI-COR.



Diagram

References

- Voß Y et al. Malaria parasite centrins can assemble by Ca²⁺-inducible condensation. *PLoS P et al.* (2023)
- Kitaoka M et al. Molecular conflicts disrupting centromere maintenance contribute to *Xenopus* hybrid inviability. *Curr Biol.* (2022)
- Navarro R et al. TGF- β -induced IGFBP-3 is a key paracrine factor from activated pericytes that promotes colorectal cancer cell migration and invasion. *Mol Oncol.* (2020)
- Miller KE et al. Kif2a scales meiotic spindle size in *Hymenochirus boettgeri*. *Curr Biol.* (2019)
- Ward et al. Interaction of the Human Respiratory Syncytial Virus matrix protein with cellular adaptor protein complex 3 plays a critical role in trafficking. *PLOS One* (2017)

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.