

Datasheet for 610-146-003

Mouse IgG Fc Antibody DyLight™ 405 Conjugated

Overview

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| Description: | Goat Anti-Mouse IgG Fc Antibody DyLight™ 405 Conjugated - 610-146-003 |
| Item No.: | 610-146-003 |
| Size: | 100 µg |
| Applications: | IF, IHC |
| Reactivity: | Mouse |
| Host Species: | Goat |

Product Details

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| Background: | Anti-Mouse IgG F(c) generated in goat is a proteolytic fragment of immunoglobulin G (IgG) obtained by limited digestion with the enzyme papain under controlled conditions of temperature, time and pH. Receptors bind the Fc portion of mouse IgG and often this fragment is removed from immunoglobulins to minimize receptor binding and lower background reactivity. |
| Synonyms: | Goat Anti Mouse IgG F(c) Antibody DyLight™ 405 Conjugated, Goat Anti-Mouse IgG Fc Antibody DyLight™ 405 Conjugated, Goat Anti Mouse IgG Fc Fragment Antibody DyLight™ 405 Conjugated |
| Host Species: | Goat |
| Specificity: | IgG Fc |
| Conjugate: | DyLight™ 405 |
| Clonality: | Polyclonal |
| Format: | IgG |
| F/P Ratio: | 3.6 |

Target Details

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|--------------------|-------------------------|
| Reactivity: | Mouse |
| Immunogen: | Mouse IgG F(c) fragment |

Purity/Specificity: This product was prepared from monospecific antiserum by immunoaffinity chromatography using Mouse 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, Mouse IgG, Mouse IgG F(c) and Mouse Serum. No reaction was observed against Mouse IgG F(ab) This antibody will react with heavy chains of Mouse IgG. Minimal reactivity is expected against other Mouse immunoglobulins.

Application Details

Suggested Applications: IF, IHC (Based on references)

Application Note: The emission spectra for this DyLight™ conjugate match the principle output wavelengths of most common fluorescence instrumentation. 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.

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

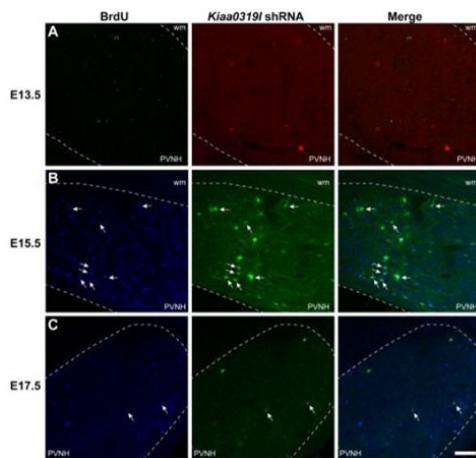
Reconstitution Buffer: Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition: Ambient

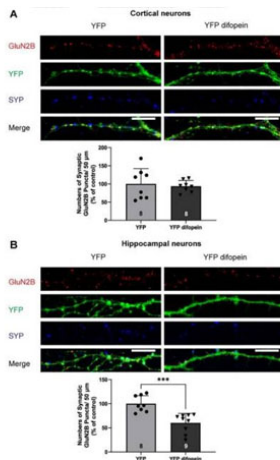
| | |
|---------------------------|---|
| Storage Condition: | Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product 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



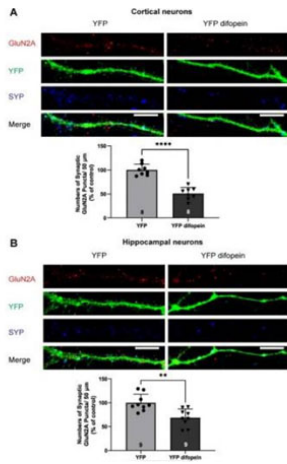
Immunofluorescence Microscopy

Heterotopic neurons are born in mid- to late-gestation. A. Following injection of BrdU at E13.5, there are no BrdU+ neurons contained within PVNH (left panel) in a rat embryonically transfected with Kiaa0319l shRNA on E15.5. There are transfected heterotopic neurons (red) (middle panel). B. Injection of BrdU at E15.5 labels large numbers of BrdU+ neurons (blue) within PVNH. Middle panel illustrate transfected neurons (green). Arrows indicate BrdU+ neurons that are co-labeled with eGFP (right panel). C. BrdU injected at E17.5 results in a population of BrdU+ neurons (blue) within PVNH, some of which are co-labeled (arrows). Wm = white matter. Bar = 200 μm in all panels. Goat Anti-Mouse IgG Fc DyLight™405 (p/n 610-146-003) for BrdU staining. Fig 4. PMID: 23831424.



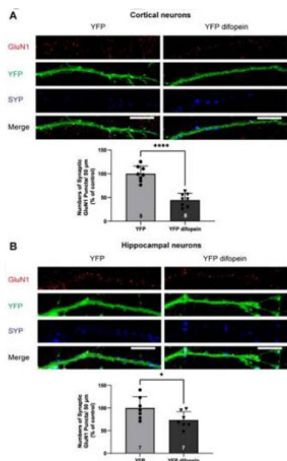
Immunofluorescence Microscopy

Inhibition of 14-3-3 proteins leads to reduced numbers of synaptic GluN2B puncta in primary glutamatergic hippocampal neurons but not in cortical neurons. A, Representative images of YFP-difopein or YFP infected cortical neurons labeled with GluN2B (red), YFP (green), and SYP (blue) at DIV21. Bars, illustrate numbers of synaptic GluN2B puncta/50 μm in YFP-difopein treated glutamatergic cortical neurons normalized to YFP controls (two-tailed unpaired Student's t-test: p = 0.6915, n = 8). B, Representative images of YFP-difopein or YFP infected hippocampal neurons labeled with GluN2B (red), YFP (green), and SYP (blue) at DIV21. Bars, illustrate numbers of synaptic GluN2B puncta/50 μm in YFP-difopein treated glutamatergic hippocampal neurons normalized to YFP controls (two-tailed unpaired Student's t-test: *** p = 0.0005, n = 8-9). Error bars indicate SD. Scale bar, 10 μm. Fig 3. PMID: 34962957.



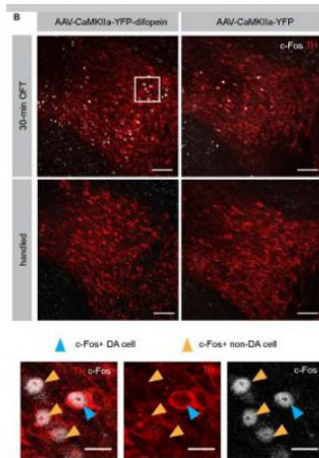
Immunofluorescence Microscopy

Inhibition of 14-3-3 proteins leads to reduced numbers of synaptic GluN2A puncta in primary glutamatergic cortical and hippocampal neurons. A, Representative images of YFP-difopein or YFP infected cortical neurons labeled with GluN2A (red), YFP (green), and SYP (blue) at DIV21. Bars, Illustrate numbers of synaptic GluN2A puncta/50 μm in YFP-difopein treated glutamatergic cortical neurons normalized to YFP controls (two-tailed unpaired Student's t-test: **** $p < 0.0001$, $n = 8$). B, Representative images of YFP-difopein or YFP infected hippocampal neurons labeled with GluN2A (red), YFP (green), and SYP (blue) at DIV21. Bars, Illustrate numbers of synaptic GluN2A puncta/50 μm in YFP-difopein treated glutamatergic hippocampal neurons normalized to YFP controls (two-tailed unpaired Student's t-test: ** $p = 0.0020$, $n = 9$). Error bars indicate SD. Scale bar, 10 μm . Fig 2. PMID: 34962957.



Immunofluorescence Microscopy

Inhibition of 14-3-3 proteins leads to reduced numbers of synaptic GluN1 puncta in primary glutamatergic cortical and hippocampal neurons. A, Representative images of YFP-difopein or YFP infected cortical neurons labeled with GluN1 (red), YFP (green), and SYP (blue) at DIV21. Bars, Illustrate numbers of synaptic GluN1 puncta/50 μm in YFP-difopein treated glutamatergic cortical neurons normalized to YFP controls (two-tailed unpaired Student's t-test: **** $p < 0.0001$, $n = 8$). B, Representative images of YFP-difopein or YFP infected hippocampal neurons labeled with GluN1 (red), YFP (green), and SYP (blue) at DIV21. Bars, Illustrate numbers of synaptic GluN1 puncta/50 μm in YFP-difopein treated glutamatergic hippocampal neurons normalized to YFP controls (two-tailed unpaired Student's t-test: * $p = 0.01413$, $n = 7$). Error bars indicate SD. Scale bar, 10 μm . Fig 1. PMID: 34962957.



Immunofluorescence Microscopy

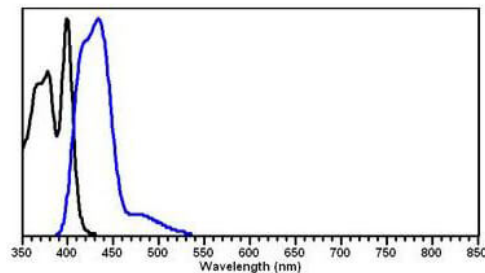
Inhibition of 14-3-3 in the dCA1 increases the number of c-Fos-ir cells in the VTA during OFT. (B) Top, representative confocal images of c-Fos and TH co-staining revealing activation of neurons in the VTA of difopein- or YFP-injected mice following either 30-min OFT or gentle handling. Scale bar = 100 μ m. Bottom, magnified representative image. Blue arrowheads point to examples of c-Fos and TH co-labeled cells (putative c-Fos-ir DA neurons). Orange arrowheads point to examples of c-Fos-ir only cells (putative c-Fos-ir non-DA neurons). Scale bar = 20 μ m. Figure 2. PMID: 35237127.

| 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.

Diagram



References

- Zhang J et al. 14-3-3 Dysfunction in Dorsal Hippocampus CA1 (dCA1) Induces Psychomotor Behavior via a dCA1-Lateral Septum-Ventral Tegmental Area Pathway. *Front Mol Neurosci.* (2022)
- Lee GS. Et al. 14-3-3 proteins promote synaptic localization of N-methyl d-aspartate receptors (NMDARs) in mouse hippocampal and cortical neurons. *PLoS One.* (2021)
- Platt MP et al. Embryonic disruption of the candidate dyslexia susceptibility gene homolog Kiaa0319-like results in neuronal migration disorders. *Neuroscience* (2013)

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.