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Datasheet for 610-146-003

Mouse IgG Fc Antibody DyLight™ 405 Conjugated

Overview

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

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

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

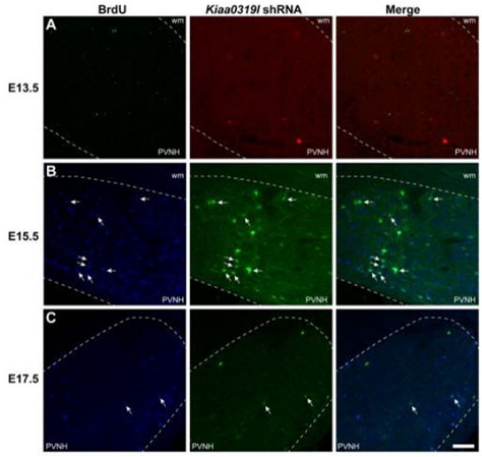
Physical State:	Lyophilized
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

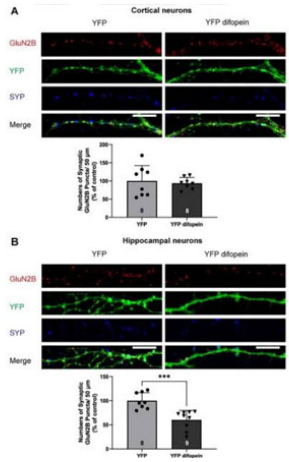
Shipping Condition:	Ambient

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.

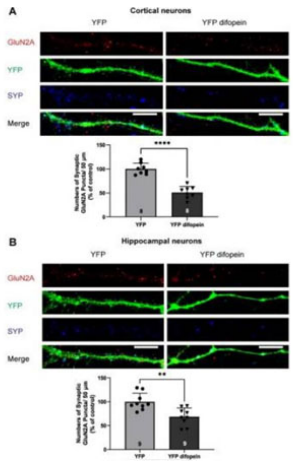
Images



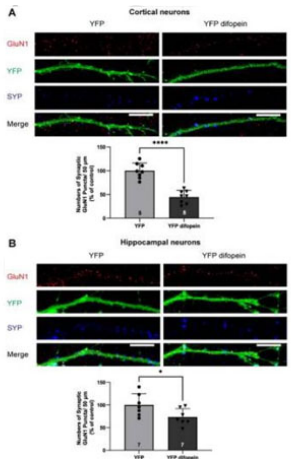
Immunofluorescence Microscopy
Heterotopic neurons are born in mid- to late-gestation. A. Following injection of BrdU at E13.5, there are no BrdU+ neurons contained within PVNH (left panel) in a rat embryonically transfected with Kiaa0319l shRNA on E15.5. There are transfected heterotopic neurons (red) (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.



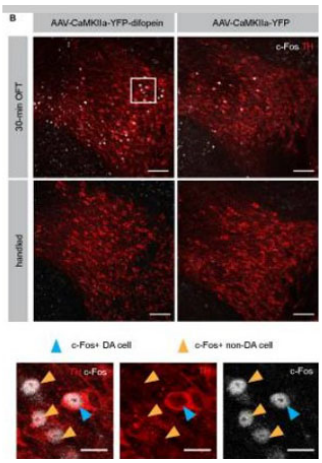
Immunofluorescence Microscopy
Inhibition of 14-3-3 proteins leads to reduced numbers of synaptic GluN2B puncta in primary glutamatergic hippocampal neurons but not in cortical neurons.A, Representative images of YFP-difopein or YFP infected cortical neurons labeled with GluN2B (red), YFP (green), and 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, 10µm. 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, 10µm. 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, 10µm. Fig 1. PMID: 34962957.

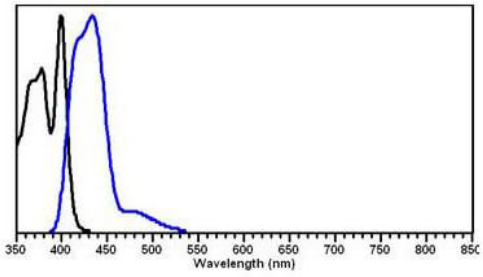


Immunofluorescence Microscopy
Inhibition of 14-3-3 in the dCA1 increases the number of c-Fos-ir cells in the VTA during OFT. (B) Top, representative confocal images of c-Fos and TH co-staining revealing activation of neurons in the VTA of difopein- or YFP-injected mice following either 30-min OFT or gentle handling. Scale bar = 100 µm. 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 µm. 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

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