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www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 605-741-002

Goat IgG (H&L) Antibody DyLight™ 488 Conjugated

Overview

Description:	Donkey Anti-Goat IgG (H&L) Antibody DyLight™ 488 Conjugated - 605-741-002
Item No.:	605-741-002
Size:	100 µg
Applications:	Dot Blot, IF
Reactivity:	Goat
Host Species:	Donkey

Product Details

Background:	Anti-Goat IgG DyLight Antibody generated in donkey detects goat 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 heavy and light chains of the antibody molecule are present.
Synonyms:	donkey anti-Goat IgG Antibody DyLight™ 488 Conjugation, donkey anti-Goat IgG DyLight™ 488 Conjugated Antibody
Host Species:	Donkey
Specificity:	IgG (H&L)
Conjugate:	DyLight™ 488
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	4.0

Target Details

Reactivity:	Goat

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

Application Details

Tested Applications:	Dot Blot
Suggested Applications:	IF (Based on references)
Application Note:	Anti-Goat IgG DyLight 488 Antibody has been tested by dot blot. 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

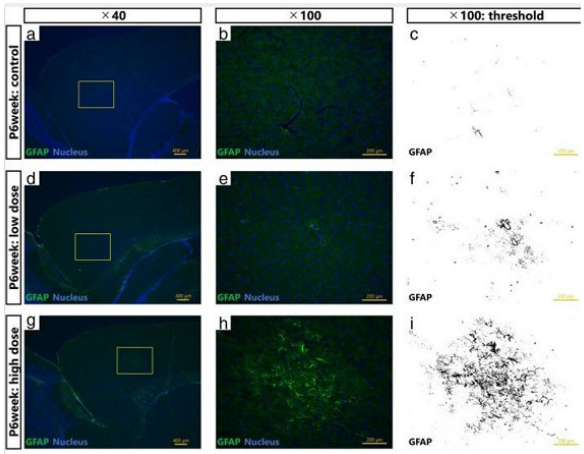
Physical State:	Lyophilized
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Reconstitution Volume:	100 µL
Reconstitution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

Shipping & Handling

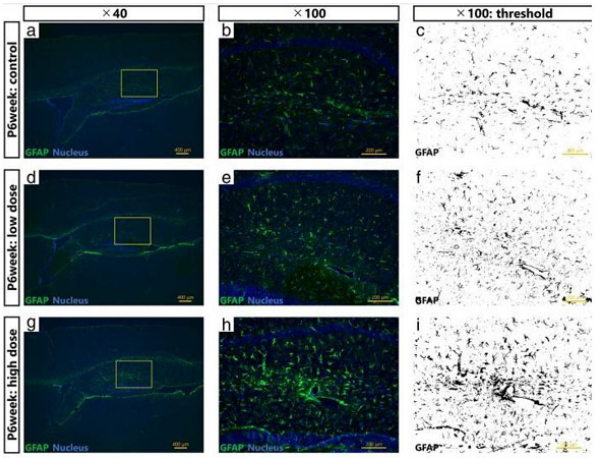
Shipping Condition:	Ambient

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.

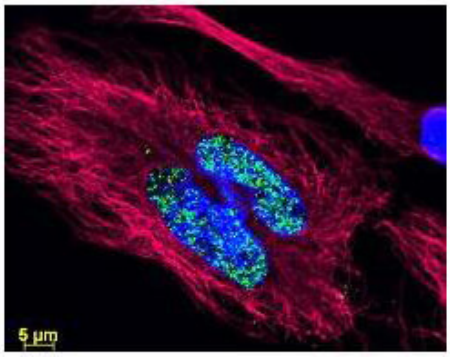
Images



Immunofluorescence Microscopy
Maternal exposure to Printex 90 carbon nanoparticles dose-dependently increases expression levels of glial fibrillary acidic protein (GFAP) in astrocytes in the offspring cerebral cortex. a, b, d, e, g and h show representative fluorescent micrographs of GFAP-positive astrocytes in the cerebral cortices of 6 week old male offspring in the control (a, b), low exposure (d, e), and high exposure groups (g, h). a, d and g gives an overview of the cerebral cortex, with b, e, and h providing enlarged views hereof, respectively. c, f, and i are grayscale views of b, e, and h, respectively, for quantification of the GFAP expression. Fig 4. PMID: 30201004.



Immunofluorescence Microscopy
Maternal exposure to Printex 90 carbon nanoparticles dose-dependently increases expression levels of glial fibrillary acidic protein (GFAP) in astrocytes in the offspring hippocampus. a, b, d, e, g and h show representative fluorescent micrographs of GFAP-positive astrocytes in the hippocampi of 6 week old male offspring in the control (a, b), low exposure (d, e), and high exposure group (g, h). a, d and g gives an overview of the hippocampus, with b, e, and h providing enlarged views of panels a, d, and g, respectively. c, f, and i are grayscale views of b, e, and h, respectively, for quantification of GFAP expression. Fig. 5. PMID: 30201004.



Immunofluorescence Microscopy
DyLight™ dyes can be used for multi-color immunofluorescence microscopy with uniform fluorescence intensity throughout the image. DyLight™ dyes are exceptionally bright and photostable and are optimized for microscopy and microarray detection methods. This image shows anti-histone detection using a DyLight™ 488 conjugate (green). Anti-Tubulin was detected using a DyLight™ 549 conjugate (red). Nuclei were counter-stained using DAPI (blue). The image was captured using an Axio Imager.Z1 (Zeiss Micro Imaging Inc).

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

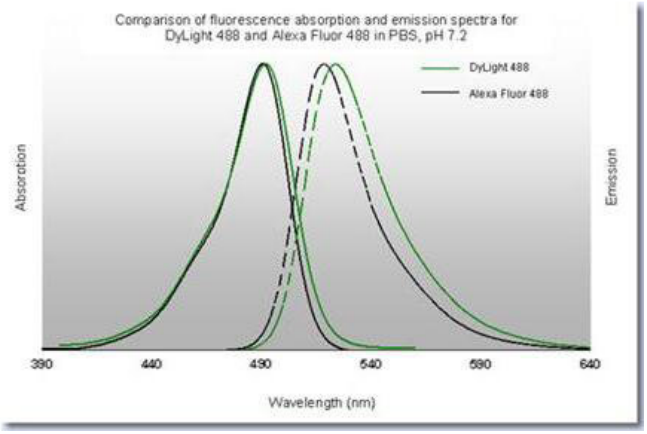


Diagram
DyLight™ 488 Fluorescence Spectra.

References

- Liu SM et al. The gut signals to AGRP-expressing cells of the pituitary to control glucose homeostasis. *J Clin Invest.* (2023)
- Umezawa M et al. Maternal inhalation of carbon black nanoparticles induces neurodevelopmental changes in mouse offspring. *Particle and Fibre Toxicology* (2018)

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