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Datasheet for 610-741-002

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

Overview

Description:	Donkey Anti-Mouse IgG (H&L) Antibody DyLight™ 488 Conjugated - 610-741-002
Item No.:	610-741-002
Size:	100 µg
Applications:	IHC
Reactivity:	Mouse
Host Species:	Donkey

Product Details

Background:	Anti-Mouse IgG DyLight488 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 488™ Conjugated Antibody, Donkey anti Mouse IgG Antibody DyLight 488™ Conjugation
Host Species:	Donkey
Specificity:	IgG (H&L)
Conjugate:	DyLight™ 488
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	4.9

Target Details

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

Suggested Applications:	IHC (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

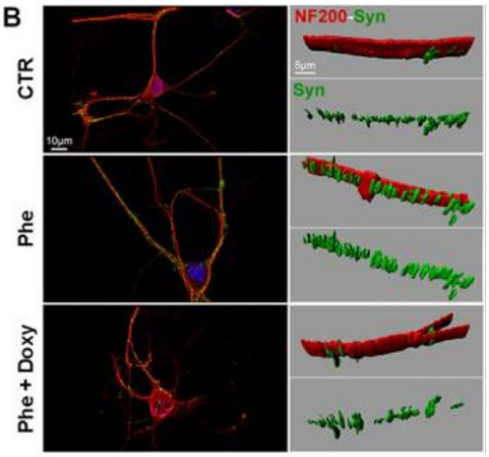
Formulation

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)

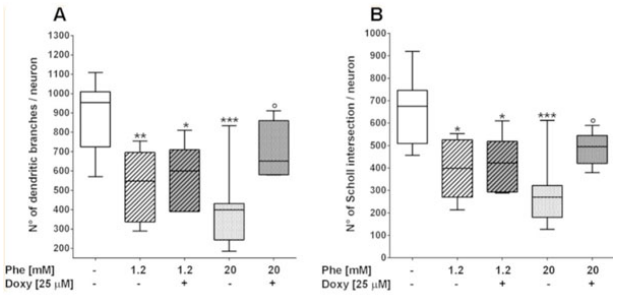
Shipping & Handling

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



Immunocytochemistry
Synaptophysin density alterations in phenylalanine-treated hippocampal neurons. Hippocampal “sandwich” co-cultures were treated with Phe/Doxy for 72 h. Cells were double-stained with NF200 (red) and synaptophysin (green); nuclei were marked by Hoechst 33258 (blue). The number of synaptophysin-positive spots was normalized to the total volume of neurofilaments (NF200 expression) after three-dimensional reconstruction of the marker signals (representative images in (B). At least ten fields (1200x) for each condition from three independent experiments were analyzed. (A) The density of synaptophysin-positive spots was significantly increased by 20 mM Phe (*$p < 0.05$ versus control; One-way ANOVA and Dunnett’s post-test). Treatment with 25 µM Doxy showed a trend towards a reduction in synaptophysin density, increasing towards control levels. Figure 11. PMID: 26510963.



Immunocytochemistry
Phenylalanine-induced dendritic sprouting alterations in hippocampal neurons prevented by doxycycline co-treatment. Hippocampal "sandwich" co-cultures were treated with Phe/Doxy for 72 h. The neuron fractions were stained with NF200 and nuclei were marked by Hoechst 33258. At least eight fields (600x) for each condition from three independent experiments were analyzed. The number of dendritic branches (A) and Sholl intersections (B) was significantly decreased by Phe treatments. Treatment with 25 µM Doxy significantly counteracted the dendritic alterations induced by 20 mM Phe. *p < 0.05, **p < 0.01, ***p < 0.001 versus control. °p < 0.05 vs 20 mM Phe. One-way ANOVA and Tukey's post-test. Figure 10. PMID: 26510963.

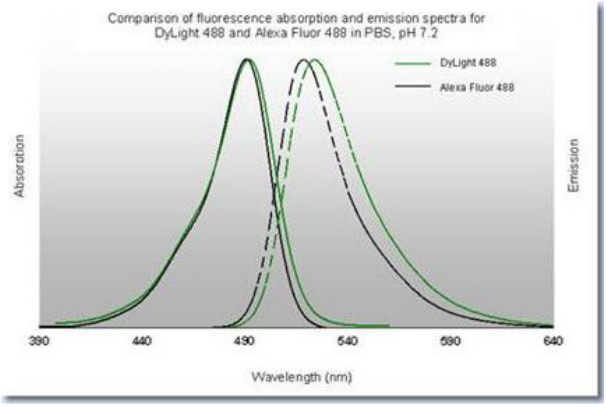
Diagram
Properties of DyLight™ Fluorescent Dyes.

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



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



References

- De Luigi A et al. Doxycycline hinders phenylalanine fibril assemblies revealing a potential novel therapeutic approach in phenylketonuria. *Scientific Reports* (2015)

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.