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Datasheet for 610-441-002

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

Overview

Description:	Rabbit Anti-Mouse IgG (H&L) Antibody DyLight™ 488 Conjugated - 610-441-002
Item No.:	610-441-002
Size:	100 µg
Applications:	FC, IHC
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	Anti-Mouse IgG DyLight 488 Antibody generated in rabbit 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:	rabbit anti-Mouse IgG Antibody DyLight™ 488 conjugation, rabbit anti-Mouse IgG DyLight™488 conjugated Antibody
Host Species:	Rabbit
Specificity:	IgG (H&L)
Conjugate:	DyLight™ 488
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	3.1

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-Rabbit 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:	FC, 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

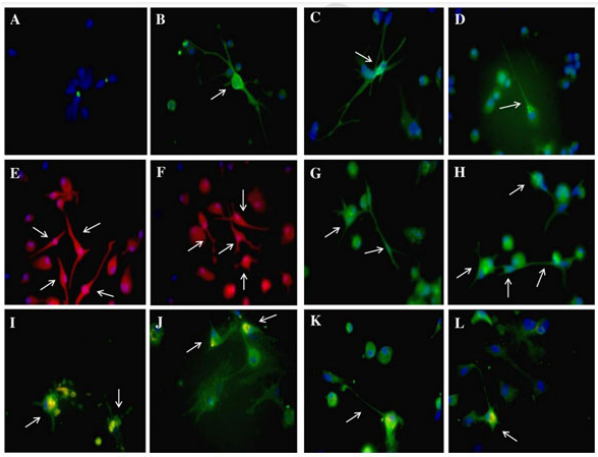
Formulation

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)

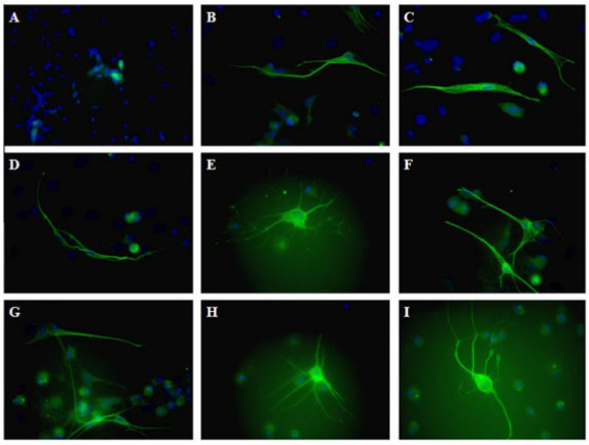
Shipping & Handling

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.

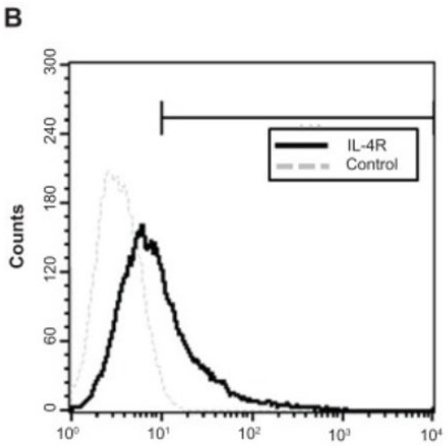
Images



Immunofluorescence Microscopy
Differentiated rMSCs immunofluorescence. Negative control (A). Cells were stained with an antibody against b-III-tubulin (green) after 14 days (B) and 28 days (C) of differentiation using Rabbit Anti-Mouse IgG DyLight™488 (p/n 610-441-002). After 28 days of differentiation rMSCs were positive for Gad67 (green) (D); choline acetyltransferase (Acht) (red) (E, F) and tyrosine hydroxylase (Th) (green) (G, H). Cells positive for Gad67 (green) also co-expressed Cxcr4 (yellow) (I, J); and cells positive for Th (green) co-expressed Cxcr4 (yellow) as well (K, L). In each experiment the nuclei were counterstained with 40 ,6-diamidino-2-phenylindole (DAPI) (blue). In our study only cells which were positive stained and had the shape characteristic for neuronal cells, were qualified as positive for examined markers (white arrows). (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.) Fig. 5. PMID: 25712637.



Immunofluorescence Microscopy
Differentiated rMSCs immunofluorescence. Cells were stained with an antibody against b-III-tubulin (green) using Rabbit Anti-Mouse IgG DyLight™488 (p/n 610-441-002). Differences in the number of primary dendrites and branching dendrites using various differentiation schemes. Negative control (A); control, differentiation using a basic differentiation medium (B and C); long-term imipramine treatment (D); CACM treatment (E); CACM + desipramine (F and G); CACM + fluoxetine (H, I). In each experiment, the nuclei were counterstained with 40 ,6- diamidino-2-phenylindole (DAPI) (blue). In our study, only cells that were positive stained and had the shape that is characteristic for neuronal cells were qualified as positive. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.) Fig. 4. .PMID: 25712637.



Flow Cytometry
(B) Flow cytometric detection of the cell-surface interleukin-4 receptor on cloned human GBM8401-luc cells. Fig 1. PMID: 22393293.

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).

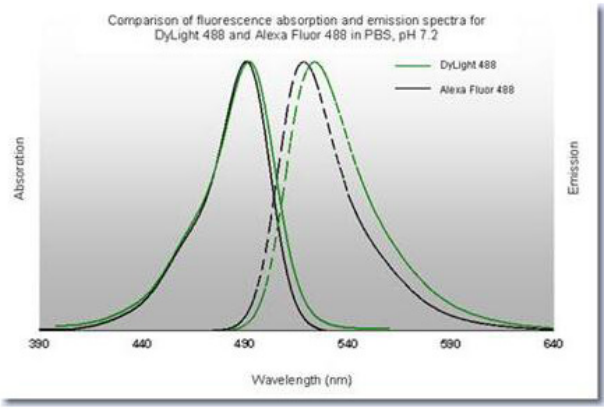


Diagram
DyLight™ 488 Fluorescence Spectra.

References

- Borkowska P et al. Differentiation of adult rat mesenchymal stem cells to GABAergic, dopaminergic and cholinergic neurons. *Pharmacol Rep.* (2015)
- Borkowska P et al. Affect of antidepressants on the in vitro differentiation of rat bone marrow mesenchymal stem cells into neuronal cells. *Eur J Pharm Sci.* (2015)
- Yang FY et al. Treating glioblastoma multiforme with selective high-dose liposomal doxorubicin chemotherapy induced by repeated focused ultrasound. *Int J Nanomedicine.* (2012)

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