

Datasheet for 611-141-002-0.5

## Rabbit IgG (H&L) Secondary Antibody DyLight™ 488 Conjugated

### Overview

<b>Description:</b>	Goat Anti-Rabbit IgG (H&L) Antibody DyLight™ 488 Conjugated (5 X 100 µg) - 611-141-002-0.5
<b>Item No.:</b>	611-141-002-0.5
<b>Size:</b>	5 x 100 µg
<b>Applications:</b>	Dot Blot, IF, Multiplex, FC, IHC, WB
<b>Reactivity:</b>	Rabbit
<b>Host Species:</b>	Goat

### Product Details

<b>Background:</b>	Anti-Rabbit IgG (H&L) DyLight 488 Antibody generated in goat detects reactivity to Rabbit 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.
<b>Synonyms:</b>	Goat anti-Rabbit IgG Antibody DyLight™488 Conjugation, Goat anti-Rabbit IgG DyLight™ 488 Conjugated Antibody
<b>Host Species:</b>	Goat
<b>Specificity:</b>	IgG (H&L)
<b>Conjugate:</b>	DyLight™ 488
<b>Clonality:</b>	Polyclonal
<b>Format:</b>	IgG
<b>F/P Ratio:</b>	3.6

## Target Details

<b>Reactivity:</b>	Rabbit
<b>Immunogen:</b>	Rabbit IgG, whole molecule
<b>Purity/Specificity:</b>	DyLight 488 Conjugated Anti-Rabbit IgG Secondary Antibody was prepared from monospecific antiserum by immunoaffinity chromatography using Rabbit 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-Goat Serum, Rabbit IgG and Rabbit Serum. This antibody will react with heavy chains of Rabbit IgG and with light chains of most Rabbit immunoglobulins.

## Application Details

<b>Tested Applications:</b>	Dot Blot, IF, Multiplex
<b>Suggested Applications:</b>	FC, IHC, WB (Based on references)
<b>Application Note:</b>	Anti-Rabbit IgG (H&L) DyLight 488 Antibody has been tested by dot blot and 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.
<b>Assay Dilutions:</b>	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
<b>FLISA:</b>	>1:20,000
<b>IF:</b>	>1:5,000
<b>WB:</b>	>1:10,000

## Formulation

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

**Reconstitution Buffer:** Restore with deionized water (or equivalent)

## Shipping & Handling

**Shipping Condition:** Ambient







**Storage Condition:** Store secondary antibody 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

### Diagram

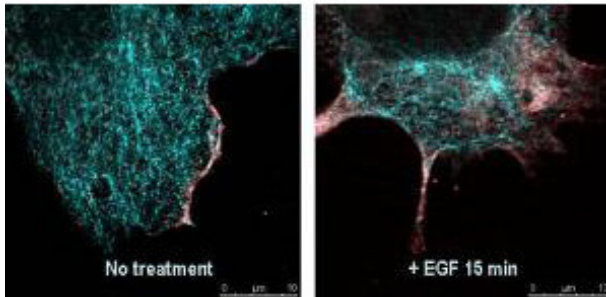
Properties of DyLight™ Fluorescent Dyes.

Emission	Color	DyLight™ Dye	Ex/Em (nm)	$\epsilon$ (M <sup>-1</sup> cm <sup>-1</sup> )	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



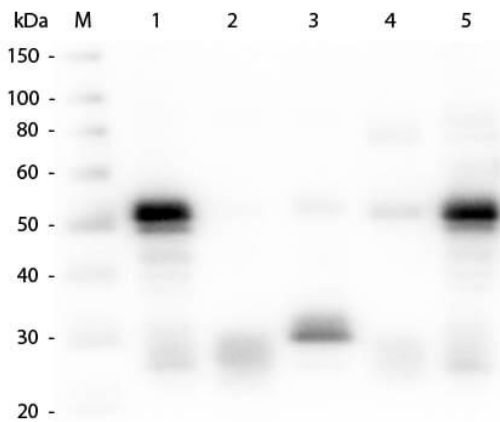
### Immunofluorescence Microscopy

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).



### Immunofluorescence Microscopy

DyLight 488™ Goat anti-Rabbit IgG used in confocal microscopy shows detection of changes in AKTpS473 localization in EGF treated A431 cells. A Leica TCS SP5 was used to detect tubulin (cyan) stained with Rockland's DyLight 488™ Goat anti-Rabbit IgG, and AKT (red) stained with Rockland's MAb anti-AKT pS473 p/n 200-301-268. The images show a weak diffuse staining of AKT in serum starved resting cells ("No treatment"), and a marked activation and migration of AKT to the periphery of the cells upon stimulation with the mitogen EGF (" + EGF 15 min").

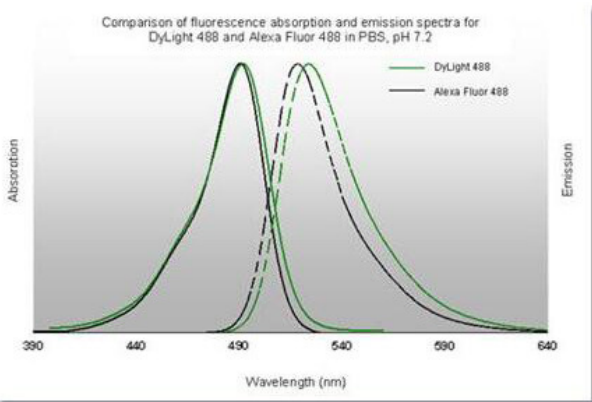


### Western Blot

Western Blot of Anti-Rabbit IgG (H&L) (GOAT) Antibody (p/n 611-1102). Lane M: 3 µl Molecular Ladder. Lane 1: Rabbit IgG whole molecule (p/n 011-0102). Lane 2: Rabbit IgG F(ab) Fragment (p/n 011-0105). Lane 3: Rabbit IgG F(c) Fragment (p/n 010-0103). Lane 4: Rabbit IgM Whole Molecule (p/n 011-0107). Lane 5: Normal Rabbit Serum (p/n B309). All samples were reduced. Load: 50 ng per lane. Block: MB-070 for 30 min at RT. Primary Antibody: Anti-Rabbit IgG (H&L) (GOAT) Antibody (p/n 611-1102) 1:1,000 for 60 min at RT. Secondary antibody: Anti-Goat IgG (DONKEY) Peroxidase Conjugated Antibody (p/n CUST10) 1:40,000 in MB-070 for 30 min at RT. Predicted/Observed Size: 25 and 50 kDa for Rabbit IgG and Serum, 25 kDa for F(c) and F(ab), 70 and 23 kDa for IgM. Rabbit F(c) migrates slightly higher.

### Diagram

DyLight™ 488 Fluorescence Spectra.



## References

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- Dufour et al. Direct Correlation between Motile Behavior and Protein Abundance in Single Cells. *PLOS Computational Biology* (2016)
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- Yang FY et al. Focused ultrasound and interleukin-4 receptor-targeted liposomal doxorubicin for enhanced targeted drug delivery and antitumor effect in glioblastoma multiforme. *J Control Release.* (2012)

## Disclaimer

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