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Datasheet for 612-441-002

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

Overview

Description:	Rabbit Anti-Rat IgG (H&L) Antibody DyLight™ 488 Conjugated - 612-441-002
Item No.:	612-441-002
Size:	100 µg
Reactivity:	Rat
Host Species:	Rabbit

Product Details

Background:	Anti-Rat IgG (H&L) DyLight™488 Antibody generated in rabbit detects reactivity to Rat 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. This Anti-Rat IgG is conjugated to DyLight™488.
Synonyms:	Rabbit Anti-Rat IgG DyLight 488™ Conjugated Antibody, Rabbit Anti-Rat IgG Antibody DyLight 488™ Conjugation
Host Species:	Rabbit
Specificity:	IgG (H&L)
Conjugate:	DyLight™ 488
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	3.6

Target Details

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

Application Details

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

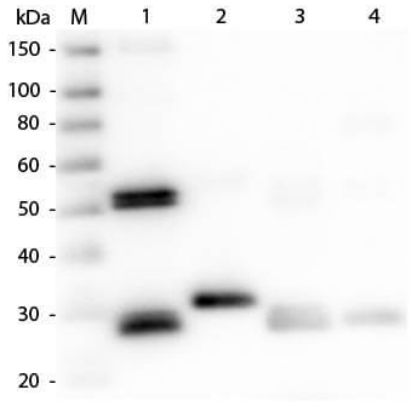
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

Diagram
Properties of DyLight™ Fluorescent Dyes.

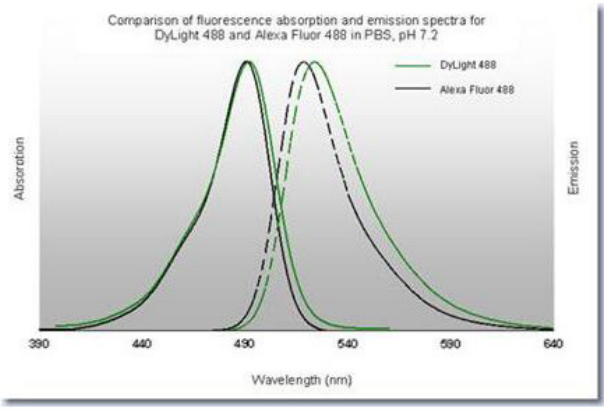
Emission	Color	DyLight™ Dye	Ex/Em (nm)	ε (M^{-1} cm^{-1})	Similar Dyes
Blue		**405**	**400/420**	**30,000**	**Alexa™ 405, Cascade Blue**
Green		488	493/518	70,000	Alexa™ 488, Cy2®, FITC
Yellow		549	550/568	150,000	Alexa™ 546, Alexa 555, Cy3®,TRITC
Red		649	646/674	250,000	Alexa™ 647, Cy5®
Near Infrared		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).



Western Blot

Western Blot of Anti-Rat IgG (H&L) (RABBIT) Antibody (p/n 612-4102). Lane M: 3 µl Molecular Ladder. Lane 1: Rat IgG whole molecule (p/n 012-0102). Lane 2: Rat IgG F(c) Fragment (p/n 012-0103). Lane 3: Rat IgG Fab Fragment (p/n 012-0105). Lane 4: Rat IgM Whole Molecule (p/n 012-0107). All samples were reduced. Load: 50 ng per lane. Block: MB-070 for 30 min at RT. Primary Antibody: Anti-Rat IgG (H&L) (RABBIT) Antibody (p/n 612-4102) 1:1,000 for 60 min at RT. Secondary Antibody: Anti-Rabbit IgG (GOAT) Peroxidase Conjugated Antibody (p/n 611-103-122) 1:40,000 in MB-070 for 30 min at RT. Predicted/Observed Size: 25 and 55 kDa for Rat IgG, 25 kDa for F(c) and Fab, 78 and 25 kDa for IgM. Rat F (c) migrates slightly higher.



Diagram

DyLight™ 488 Fluorescence Spectra.

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.