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Datasheet for 612-144-120

Rat IgG (H&L) Antibody DyLight™ 680 Conjugated Pre-Adsorbed

Overview

Description:	Goat Anti-Rat IgG (H&L) Antibody DyLight™ 680 Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rb & Sh Serum Proteins) - 612-144-120
Item No.:	612-144-120
Size:	100 µg
Applications:	WB
Reactivity:	Rat
Host Species:	Goat

Product Details

Background:	Anti-Rat IgG (H&L) DyLight™680 Antibody generated in goat 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™680.
Synonyms:	Goat Anti-Rat IgG DyLight 680™ Conjugated Antibody, Goat Anti-Rat IgG Antibody DyLight 680™ Conjugation
Host Species:	Goat
Specificity:	IgG (H&L)
Conjugate:	DyLight™ 680
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	2.1

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 solid phase adsorption(s) to remove any unwanted reactivities. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Goat Serum, Rat IgG and Rat Serum. No reaction was observed against Bovine, Chicken, Goat, Guinea Pig, Hamster, Horse, Human, Mouse, Rabbit and Sheep Serum Proteins. This antibody will react with heavy chains of rat IgG and with light chains of most rat immunoglobulins.

Application Details

Suggested Applications:	WB (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

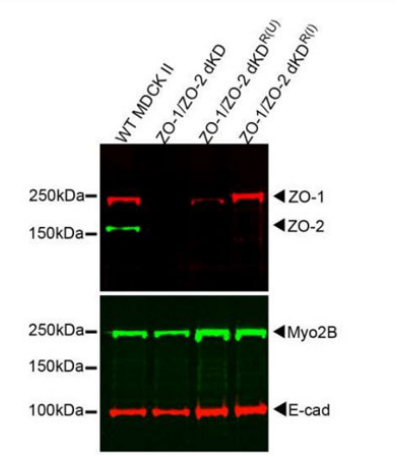
Formulation

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)

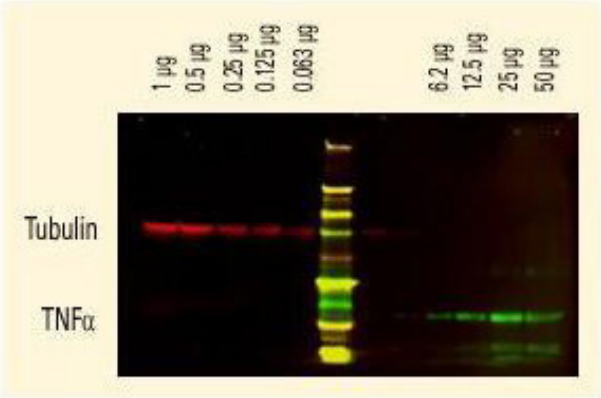
Shipping & Handling

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



Western Blot
Immunoblot shows ZO-1 and ZO-2 proteins are effectively depleted in dKD cell lines, whereas E-cadherin and myosin II protein levels are equal to controls. Western blot of ZO-1 (1:500) and ZO-2 (1:1000) polypeptides in MDCK II Tet-off control cells, ZO1/ZO-2 dKD cells, and ZO1R dKD cells expressing a Tet-inducible full-length ZO-1 rescue transgene. ZO-1 and ZO-2 expression in dKD cell lines are almost undetectable. In ZO1R dKD cell line, induction of ZO1R (I) restores ZO-1 expression to levels equivalent to those in controls, while ZO-2 expression remains suppressed. Myosin IIB (1:1000) and E-cadherin (1:1000) expression in dKD cell lines are equal to control cells. The appropriate species-specific secondary antibodies anti-rat 680 (p/n 612-144-120), anti-mouse 680 (p/n 610-730-124), and anti-rabbit 800CW (p/n 611-731-127) with 1:2,000 dilution. Supplementary Figure 7. PMID: 29044161.

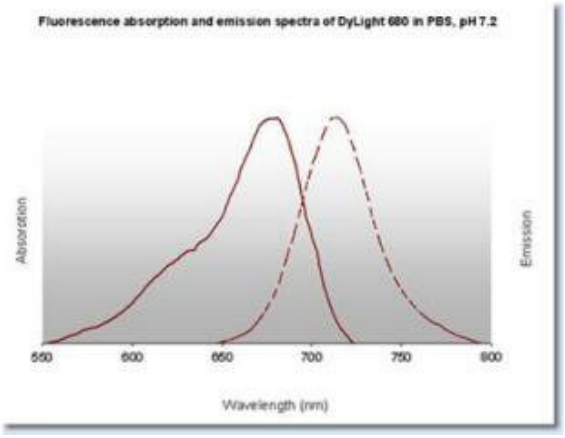


Western Blot
DyLight™ dyes can be used for two-color Western Blot detection with low background and high signal. Anti-tubulin was detected using a DyLight™ 680 conjugate. Anti-TNFa was detected using a DyLight™ 800 conjugate. The image was captured using the Odyssey® Infrared Imaging System developed by LI-COR.

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



References

- Cartagena-Rivera et al. Apical surface supracellular mechanical properties in polarized epithelium using noninvasive acoustic force spectroscopy. *Nature Communications* (2017)

Disclaimer

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