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Datasheet for 612-143-120

Rat IgG (H&L) Antibody DyLight™ 649 Conjugated Pre-Adsorbed

Overview

Description:	Goat Anti-Rat IgG (H&L) Antibody DyLight™ 649 Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rb & Sh Serum Proteins) - 612-143-120
Item No.:	612-143-120
Size:	100 µg
Applications:	IHC
Reactivity:	Rat
Host Species:	Goat

Product Details

Background:	Anti-Rat IgG (H&L) DyLight™649 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™649.
Synonyms:	Goat Anti-Rat IgG DyLight 649™ Conjugated Antibody, Goat Anti-Rat IgG Antibody DyLight 649™ Conjugation
Host Species:	Goat
Specificity:	IgG (H&L)
Conjugate:	DyLight™ 649
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	1.8

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:	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

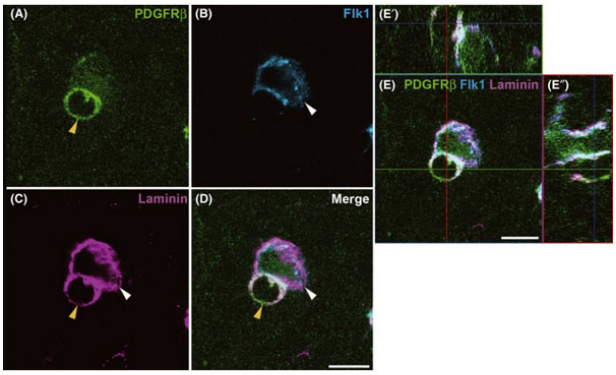
Formulation

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)

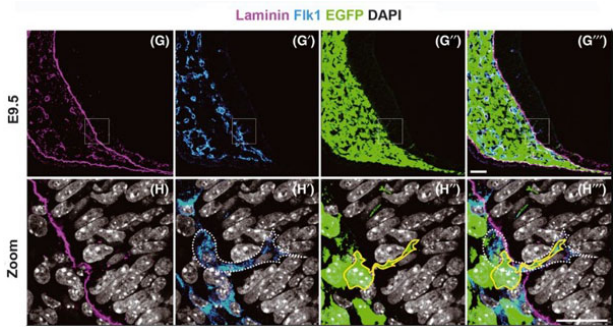
Shipping & Handling

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.

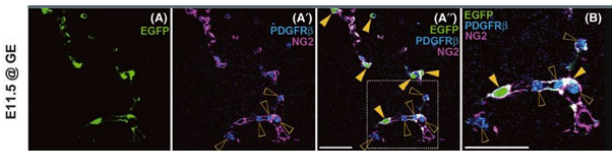
Images



Immunofluorescence Microscopy
Existence of non-pericyte enhanced green fluorescent protein (EGFP+) cells in the telencephalon of E11.5 P0-Cre/EGFP mice. (A-B) A coronal section at the telencephalic level is stained with anti-GFP, PDGFRβ, and NG2 antibodies. Most of EGFP+ cells express both PDGFRβ and NG2 (yellow arrowheads). (B) High-magnification of the dashed square in A''. PDGFRβ is also expressed in hematopoietic cells (open arrowheads in A'–B). Fig 5. PMID: 23157329.



Immunofluorescence Microscopy
Penetration and distribution of neural crest-derived cells (NCDCs) in the P0-Cre/EGFP mouse telencephalon. (G–H''') A coronal section at the telencephalic level of the E9.5 embryo is stained with anti-laminin, Flk1, GFP antibodies and counter-stained 4', 6-diamidino-2-phenylindole (DAPI). High-magnification images within the squares in G–G''' are shown in H–H'''. Through the laminin+ basement membrane (H), an endothelial cell (white dashed line in H') invades the telencephalon together with an EGFP+ cell (yellow line in H' '). Scale bars: (for G–G'''), 50 µm; H''' (for H–H'''), 25 µm. Figure 2. PMID: 23157329.

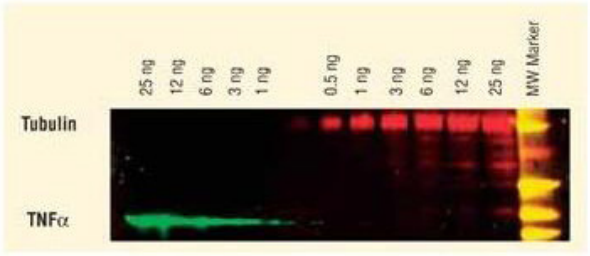


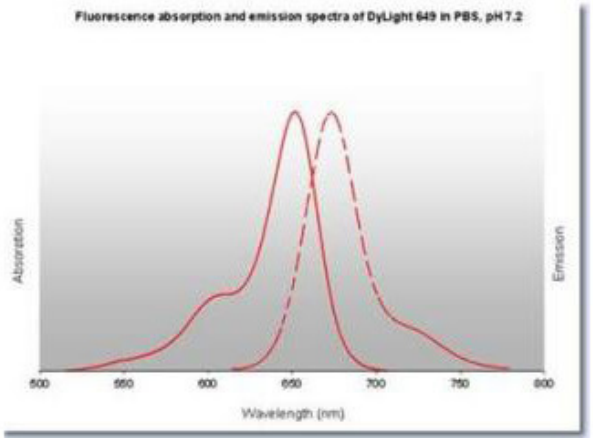
Immunofluorescence Microscopy
The usability of PDGFRβ and NG2 as pericyte markers in the telencephalon. (A–E'') Immunostaining with anti-PDGFRβ, Flk1, and laminin antibodies on coronal section at the telencephalic level of E11.5 P0-Cre mouse embryo. (A–D) A PDGFRβ+ pericyte (yellow arrowheads) wraps around Flk1+ endothelial tube (white arrowheads), and these cell types are surrounded by laminin+ basement membrane. This pattern is also clearly observed in orthogonal view of the image shown in D (E–E''). Fig 3. PMID: 23157329.

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

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™ 549 conjugate. Anti-TNFa was detected using a DyLight™ 649 conjugate. The image was captured using the Typhoon™ 9410 Imaging System.





Diagram

References

- Yamanishi E et al. Penetration and differentiation of cephalic neural crest-derived cells in the developing mouse telencephalon. *Dev Growth Differ.* (2012)

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.