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Datasheet for 613-742-168

Sheep IgG (H&L) Antibody DyLight™ 549 Conjugated Pre-Adsorbed

Overview

Description:	Donkey Anti-Sheep IgG (H&L) Antibody DyLight™ 549 Conjugated (Min X Ch GP Ham Hs Hu Ms Rb & Rt Serum Proteins) - 613-742-168
Item No.:	613-742-168
Size:	100 µg
Applications:	IF, Multiplex
Reactivity:	Sheep
Host Species:	Donkey

Product Details

Background:	Anti-Sheep IgG (H&L) DyLight™549 Antibody generated in donkey detects reactivity to sheep 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-Sheep IgG is conjugated to DyLight™549.
Synonyms:	Donkey Anti Sheep IgG DyLight 549™ Conjugated Antibody, Donkey Anti-Sheep IgG Antibody DyLight 549™ Conjugation
Host Species:	Donkey
Specificity:	IgG (H&L)
Conjugate:	DyLight™ 549
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	3.6

Target Details

Reactivity:	Sheep
Immunogen:	Sheep IgG whole molecule
Purity/Specificity:	This product was prepared from monospecific antiserum by immunoaffinity chromatography using Sheep 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-Donkey Serum, Sheep IgG and Sheep Serum. No reaction was observed against Chicken, Guinea Pig, Hamster, Horse, Human, Mouse, Rabbit or Rat Serum Proteins. This antibody will react with heavy chains of Sheep IgG and with light chains of most Sheep immunoglobulins.

Application Details

Suggested Applications:	IF, Multiplex (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

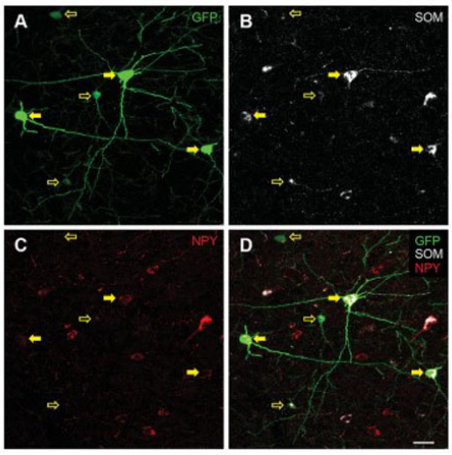
Formulation

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)

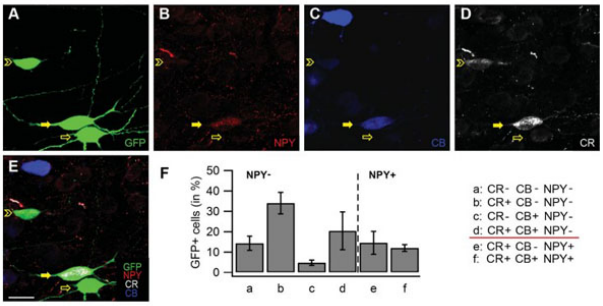
Shipping & Handling

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.

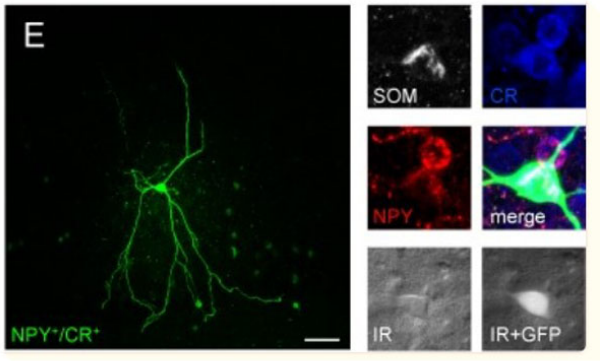
Images



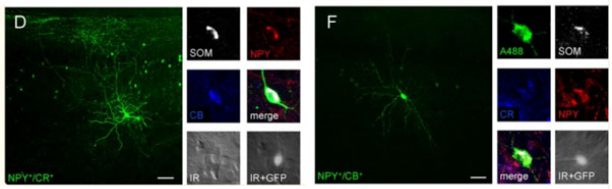
Immunofluorescence Microscopy
Analysis of neuropeptide Y (NPY) expressing interneurons in the cingulate cortex of FVB-Tg(GadGFP)45704Swn/J mice. A–D: Representative confocal images of cells immunopositive for GFP (green), somatostatin (SOM, white), and NPY (red), and merged image of all channels. Solid yellow arrows indicate GFP1/SOM1/NPY 1 cells and open yellow arrows GFP1/ SOM1/NPY2 cells. E: Mean 6 standard deviation of relative numbers of GFP1/SOM2/NPY2 cells, GFP1/SOM1/NPY2 cells, and GFP1/SOM1/NPY 1 cells in the cingulate cortex. Scale bar 5 20 lm in D (applies to A–D). Figure 10. PMID: 26669716.



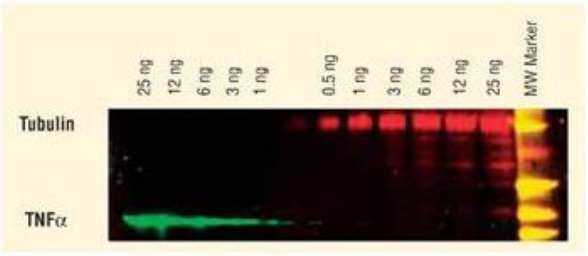
Immunofluorescence Microscopy
Analysis of coexpression of calretinin (CR), calbindin (CB), and NPY in GFP 1 cells in the cingulate cortex of FVBTg (GadGFP)45704Swn/J mice. A–E: Representative confocal images of cells in layers II–III of the cingulate cortex immunopositive for GFP (green), NPY (red), CR (white), and CB (blue). The solid yellow arrow indicates GFP1/CR1/CB1/NPY 1 cells, the open yellow arrow GFP1/CR2/CB2/NPY2 cells, and the open yellow arrowhead GFP1/CR1/CB1/NPY2 cells. F: Mean 6 standard deviation of relative numbers of GFP1/CR2/CB2/NPY2 cells (a), GFP1/CR1/CB2/NPY2 cells (b), GFP1/CR2/CB1/NPY2 cells (c), GFP1/CR1/ CB1/NPY2 cells (d), GFP1/CR1/CB2/NPY 1 cells (e), and GFP1/CR1/CB1/NPY 1 cells (f). Scale bar 5 20 lm in E (applies to A–E). Figure 11. PMID: 26669716.



Immunofluorescence Microscopy
Morphological variety of group I GIN. A-E, left panel Confocal z-stack images as maximum intensity projections of representative group I GIN. Scalebars: 50 µm. Right panel Immunolabeling of biocytin-injected cells for GFP (green), CB (white or blue), CR (white or blue), SOM (white) or NPY (red). Fluorescence (white, GFP) and infrared (IR)-DIC (grey) images of recorded cells were acquired prior recording. Fig 8. PMID: 30001424.



Immunofluorescence Microscopy
Morphological varieties in group II GIN. Many group I GIN classified as Martinotti cells with massive axonal arborizations in layer 1 and in the home layer. All scalebars: 50 µm. A-F, left panel Confocal Z-stack images of biocytin-injected GIN as maximum intensity projections. Right panel Corresponding immunolabelings of the cells shown in the left panel. Cells were labeled for GFP (green), CR (white or blue), CB (blue or white), SOM (white) or NPY (red). Fluorescence (GFP, white) and infrared-DIC (grey) images were acquired of cells in A-F prior recording. Fig 9. PMID: 30001424.

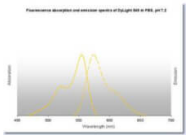


Western Blot
DyLight™ dyes can be used for two-color Western Blot detection with low background and high signal. Anti-tubulin was detected using a DyLight™ 549 conjugate. Anti-TNFa was detected using a DyLight™ 649 conjugate. The image was captured using the Typhoon™ 9410 Imaging System.

Diagram
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

- Riedemann et al. Two types of somatostatin-expressing GABAergic interneurons in the superficial layers of the mouse cingulate cortex. *PLOS One* (2018)
- Riedemann T et al. Immunocytochemical heterogeneity of somatostatin-expressing GABAergic interneurons in layers II and III of the mouse cingulate cortex: A combined immunofluorescence/design-based stereologic study. *J Comp Neurol.* (2016)

Disclaimer

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