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Datasheet for S000-41**Streptavidin DyLight™ 488 Conjugated****Overview**

Description:	Streptavidin DyLight™ 488 Conjugated - S000-41
Item No.:	S000-41
Size:	100 µg
Applications:	IF, WB, IHC, Multiplex

Product Details

Background:	Streptavidin is isolated from bacteria, <i>Streptomyces avidinii</i> , and has an exceptionally high binding affinity for B7 (biotin). Rockland offers streptavidin in unconjugated and conjugated forms for common immunoassays including ELISA, western blotting, immunohistochemistry. Streptavidin is a tetrameric protein capable of binding 4 biotin groups to each molecule of streptavidin. While streptavidin has identical binding properties as avidin, it lacks the glycoprotein portion of the molecule and therefore shows less non-specific binding. Streptavidin is a slightly smaller molecule with a molecular weight of approximately 53.6 kDa. The sequence of avidin only shows 30% homology with streptavidin, and anti-avidin and anti-streptavidin antibodies are not immunologically cross reactive. Rockland conjugates a broad group of secondary antibodies to many of the classic fluorescent markers including fluorescein, rhodamine, Texas Red, CyDyes™ and Phycoerythrin (RPE). Rockland also produces many next generation fluorochrome dyes designed for detection of primary antibodies in multiplex, multi-color analysis. Next generation fluorochrome conjugates (DyLight™ dyes) offer superior absorption (high extinction coefficient), high fluorescence quantum yield, and superior high photostability.
Synonyms:	SA, S avidin, streptococcus avidin, streptavidin DyLight™ 488 Conjugated
Conjugate:	DyLight™ 488
F/P Ratio:	0.8

Target Details

Purity/Specificity:	This product was prepared from chromatographically purified Streptavidin. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Streptavidin.
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Application Details

Tested Applications:	IF, WB
Suggested Applications:	IHC, Multiplex (Based on references)
Application Note:	Streptavidin DyLight™488 has been tested by western blot and immunofluorescence 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.
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

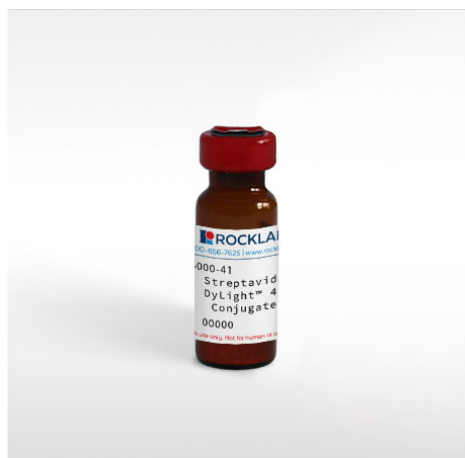
Formulation

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.

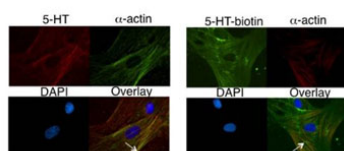
Images



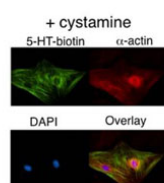
Bottle

Streptavidin DyLight™ 488 Conjugated

A



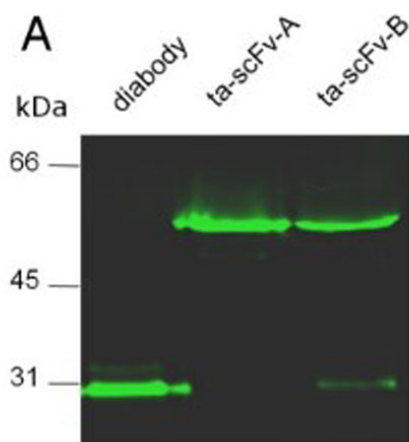
B



Immunocytochemistry

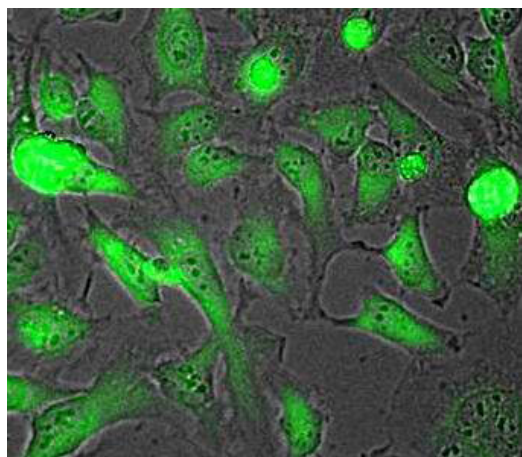
5-HT and 5-HT-biotin localize to α -actin and are incorporated into proteins. A. Immunocytochemistry of aortic smooth muscle cells incubated with exogenous 5-HT (12.7 μ M; left) or 5-HT biotin (12.7 μ M; right) and α -actin for 1 hour prior to fixation and visualization using an anti-rabbit fluorescent secondary (for 5-HT) or DyLight™ 488 streptavidin (p/n S000-41) secondary (for 5-HT biotin). Representative of four different aortic explants. B. Effect of cystamine (10 mM) on 5-HT-biotin localization in aortic smooth muscle cells. Representative of four different aortic explants. Fig 6. PMID: 19479059.

A



Western Blot

Characterization of secreted bispecific antibodies. (A) Engineered, bispecific antibodies secreted into the conditioned medium of stably transfected HEK293 cells (293diabody, 293ta-scFv-A or 293ta-scFv-B) were characterized for expression levels and binding properties. (A) western blot analysis with DyLight 488 conjugated-streptavidin (p/n S000-41). Migration distances of molecular mass markers are indicated (kDa). The blot was developed with anti-His tag mAb. Figure 2. PMID: 25057445.

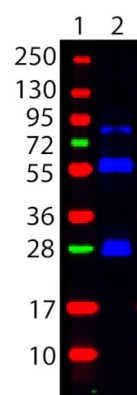


Immunofluorescence Microscopy

Rockland Dylight 488 conjugated Streptavidin was used to stain HeLa cells by immunofluorescence. HeLa cells were plated in 12 well plates, fixed for 5 min in 1:1 MeTOH:Acetone, blocked with MB-071 (preservative free) for 15 min and stained 1 hr with Rockland biotin conjugated anti lactate dehydrogenase antibody (p/n 200-1673 lot 5412 1:200 in blocking buffer). Plate was washed 3X in PBS, and primary biotin conjugate was detected using DyLight 488 conjugated Streptavidin (S000-41 lot 21097) 1:10000 for 30 min. Well was washed 3X in PBS. Image was taken using EVOS fl All Digital Inverted Fluorescence Microscope by AMG (Advanced Microscopy Group).

Western Blot

Western Blot showing detection Biotin. 100 ng of Biotin conjugated Guinea Pig IgG (Lane 2) was run on a 4-20% gel and transferred to 0.45 μ m nitrocellulose. After blocking with 1% BSA-TTBS (p/n MB-013, diluted to 1X) 30 min at 20°C, STREPTAVIDIN DyLight™ 488 Conjugated (p/n S000-41) was used at 1:1000 in Blocking Buffer for Fluorescent Western Blotting (p/n MB-070) and imaged using the Bio-Rad VersaDoc® 4000 MP. Molecular weight markers are in lane 1.



References

- Compte, M et al. Functional comparison of single-chain and two-chain anti-CD3-based bispecific antibodies in gene immunotherapy applications. *Oncoimmunology* (2014)
- Watts, SW. et al. Serotonylation of vascular proteins important to contraction. *PloS One* (2009)

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.