Datasheet for 200-401-095S

# Streptavidin Antibody

## Overview

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| **Description:** | Anti-Streptavidin (RABBIT) Antibody - 200-401-095S |
| **Item No.:** | 200-401-095S |
| **Size:** | 25 µL |
| **Applications:** | Dot Blot, ELISA, IF, LFA, Other |
| **Reactivity:** | Streptavidin |
| **Host Species:** | Rabbit |

## Product Details

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| **Background:** | Streptavidin antibody is a 60 kDa protein purified from the bacterium Streptomyces avidinii. Streptavidin homo-tetramers have an extraordinarily high affinity for biotin (also known as vitamin B7). With a dissociation constant (Kd) on the order of ≈10−14 mol/L,[1] the binding of biotin to streptavidin is one of the strongest non-covalent interactions known in nature. Streptavidin is used extensively in molecular biology and bio-nanotechnology due to the streptavidin-biotin complex's resistance to organic solvents, denaturants (e.g. guanidinium chloride), detergents (e.g. SDS, Triton), proteolytic enzymes, and extremes of temperature and pH. Anti-STREPTAVIDIN antibody is ideal for investigators involved in GFP and Epitope research. |
| **Synonyms:** | rabbit anti-Streptavidin Antibody, rabbit anti Streptavidin |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Reactivity:** | Streptavidin |
| **Immunogen Type:** | Native Protein |
| **Immunogen:** | Streptavidin [Streptomyces avidinii] |

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| **Purity/Specificity:** | Anti-Streptavidin antibody is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum as well as purified and partially purified Streptavidin [Streptomyces avidinii]. No cross reactivity occurs against Avidin. |
| **Relevant Links:** | • 200-401-095S SDS |

## Application Details

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| **Tested Applications:** | Dot Blot, ELISA |
| **Suggested Applications:** | IF, LFA, Other (Based on references) |
| **Application Note:** | Anti-Streptavidin antibody has been tested by ELISA and dot blot and is suitable for western blot, and immunohistochemistry, as well as other assays requiring lot-to-lot consistency. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:200,000 |
| **IHC:** | 1:1,500 - 1:5,000 |
| **WB:** | 1:3,000 - 1:12,000 |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **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:** | None |

## Shipping & Handling

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| **Shipping Condition:** | Dry Ice |

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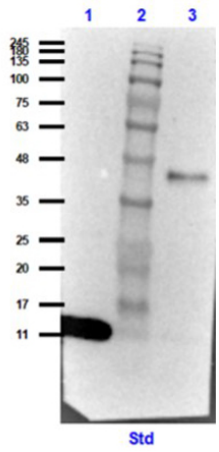
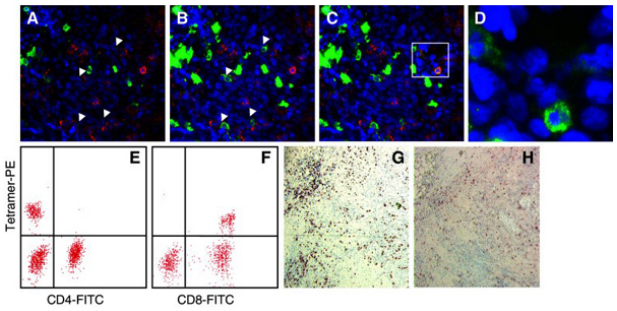
| **Storage Condition:** | Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing. |
| **Expiration:** | Expiration date is three (3) months from date of receipt. |

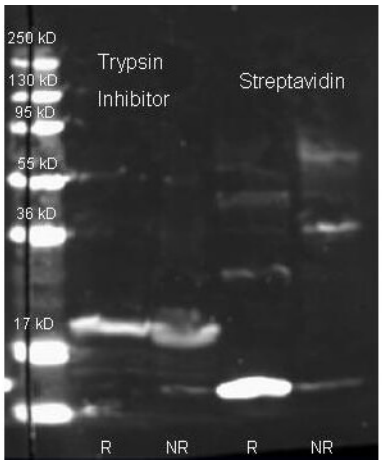
## Images



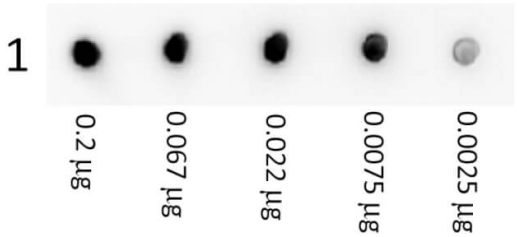

**Western Blot**
Western Blot of Rabbit Anti-Streptavidin Antibody.
Lane 1: Streptavidin - Reduced (p/n S000-01) [0.05µg].
Lane 2: Opal Prestained Molecular Weight Marker (p/n MB-210-0500).
Lane 3: Streptavidin - Non-Reduced (p/n S000-01) [0.05µg].
Primary Antibody: Rabbit Anti-Streptavidin at 1:1000 overnight at 2-8°C.
Secondary Antibody: Goat Anti-Rabbit IgG Peroxidase (p/n 611-103-122) at 1:70,000 for 30 mins at RT.
Block: Blocking Buffer for Fluorescent Western Blotting (p/n MB-070) for 60 mins at RT.
Expect: ~13kDa reduced, ~60kDa non-reduced.



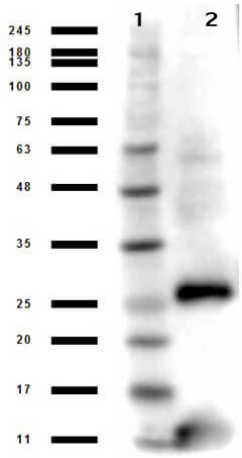

**Immunofluorescence Microscopy**
CD8 staining efficiency. DTH biopsy from patient 5 (lesion DC + 3 peptides) stained with HLA-A2.1-tyrosinase369 tetramer (red), anti-CD8 (green) and DAPI (blue) with increasing exposure time for the FITC filter (ranging from 2–3 s (a) to 15–20 s (c), for comparison: exposure time TRITC 7–8 s). Arrows indicate CD8+ cells that were not visible at shorter exposure times for the FITC filter. In c, only for the boxed area an increased exposure time (15–20 s) is shown to prevent overexposure from other parts of the section. d Enlarged two color overlay for green (CD8) and blue (DAPI) of the boxed area from c. Tetramer analysis by flow cytometry of DTH-derived T cells from patient 5. On the y-axis MHC class I tetramer PE staining and on the x-axis CD4 (e) or CD8 (f). Note the difference in fluorescence intensity in the tetramer positive population (MFI CD4:152 vs. MFI CD8:83) whereas the percentage of positive cells is equal (17%). CD8+ cells visualized with the ABC-peroxidase kit with AEC (red-brown staining) as substrate in corresponding areas on tissue sections from tonsil fixed with acetone (g) or PFA (h).
Fig 5
PMID: 17440724




**Western Blot**
Rockland Rabbit anti Streptavidin (200-4195 lot 23495) and Biotin conjugated Rabbit anti-trypsin inhibitor antibody (200-4679 lot 6594) were used to detect target proteins Trypsin Inhibitor (left) and Streptavidin (right) under reducing (R) and non-reducing (NR) conditions. Reduced samples of purified target proteins contained 4% BME and were boiled for 5 minutes. Samples of ~1ug of protein per lane were run by SDS-PAGE. Protein was transferred to nitrocellulose and probed with 1:1000 dilution of primary antibody (ON 4 C). Detection shown was using Dylight 649 conjugated Donkey anti rabbit (611-743-127 lot 20831 1:10K 1.5 hr RT in MB-070) and imaged on the BioRad VersaDoc System.




**Dot Blot**
Dot Blot showing the detection of Streptavidin. A three-fold serial dilution of DyLight™ 488 Conjugated Streptavidin starting at 200ng was spotted onto 0.45 µm nitrocellulose and blocked in 1% BSA-TTBS (p/n MB-013, diluted to 1X) 30 min at 20°C. Anti-Streptavidin (RABBIT) Antibody (p/n 200-401-095) was incubated in Blocking Buffer for Fluorescent Western Blotting (p/n MB-070) at 1:1,000 for 1 Hour at 20°C. An HRP Gt-a-Rb secondary antibody (p/n 611-103-122) was incubated at 1:40,000 for 30 min at 20°C and imaged using the Bio-Rad VersaDoc® 4000 MP.




**Western Blot**
Western Blot results of Rabbit Anti-Streptavidin Antibody. Lane 1: Opal Prestained Molecular Weight Ladder (p/n MB-210-0500). Lane 2: Streptavidin (p/n S000-01). Load: 50ng. Primary Antibody: Rabbit Anti-Streptavidin at 1:1000 overnight at 4°C. Secondary Antibody: Goat anti-Rabbit HRP (p/n 611-103-122) at 1:70,000 for 30min at RT. Blocking: BlockOut (p/n MB-073) for 30 min at RT.

## References


- M Herrmann et al. Enzymatically-generated fluorescent detection in micro-channels with internal magnetic mixing for the development of parallel microfluidic ELISA. *Lab Chip.* (2006)
- Shiyanovskii SV et al. Real-time microbe detection based on director distortions around growing immune complexes in lyotropic chromonic liquid crystals. *Phys Rev E Stat Nonlin Soft Matter Phys.* (2005)


## Disclaimer

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