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Datasheet for 200-4695

Streptavidin Antibody Biotin Conjugated

Overview

Description:	Anti-Streptavidin (RABBIT) Antibody Biotin Conjugated (BULK ORDER) - 200-4695
Item No.:	200-4695
Size:	10 mg
Applications:	Dot Blot, FISH, IF, Multiplex
Reactivity:	Streptavidin
Host Species:	Rabbit

Product Details

Background:	Anti-Streptavidin Antibody is Biotin Conjugated and detects streptavidin. Biotin is widely used throughout the biotechnology industry to conjugate proteins for biochemical assays. Biotin's small size typically does not affect the biological activity of protein upon biotinylation. Streptavidin and avidin bind biotin with high affinity (Kd of 10−14 mol/l to 10−15 mol/l) and thus biotinylated proteins of interest can be enriched from a sample due to this highly stable interaction. Biotin conjugated anti-streptavidins are used as an amplifying reagent in immunohistochemistry, microarray assays, ELISAs, blots, and other applications. This antibody reagent can bind to streptavidin through the antibody F(ab) or can be bound by streptavidin through the high affinity biotin-streptavidin interaction.
Synonyms:	rabbit anti-Streptavidin Antibody biotin Conjugation, biotin conjugated rabbit anti-Streptavidin antibody, Anti-Streptavidin BAC Antibody
Host Species:	Rabbit
Conjugate:	Biotin
Clonality:	Polyclonal
Format:	IgG

Target Details

Reactivity:	Streptavidin
Immunogen Type:	Native Protein
Immunogen:	Streptavidin (Streptomyces avidinii)

Purity/Specificity:	Streptavidin Antibody Biotin Conjugated was prepared from monospecific antiserum by delipidation, defibrination, salt fractionation and ion exchange chromatography. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-biotin, anti-Rabbit Serum and Streptavidin. No reaction was observed against Avidin.

Application Details

Tested Applications:	Dot Blot
Suggested Applications:	FISH, IF, Multiplex (Based on references)
Application Note:	Biotin Conjugated Anti-Streptavidin Antibody has been tested by dot blot and is suitable to be assayed by ELISA for the detection of streptavidin in a standard ELISA using Peroxidase as a reporter. A working dilution of 1:10,000 to 1:400,000 of the reconstitution concentration is suggested for this product. Optimization of the concentration in immunoassays should be performed by the researcher.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:400,000

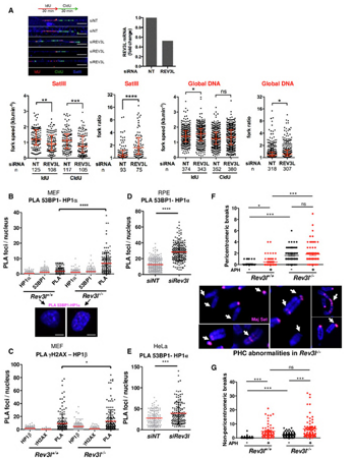
Formulation

Physical State:	Lyophilized
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:	1.0 mL
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
A.) Representative fibers of newly synthesized DNA labeled with IdU (red) for 30 min and CldU (green) for 30 min in HeLa cells transfected with non-targeting siRNA (siNT) or siRNA against Rev3l. SatIII probe is visualized in blue. Scale bar: 10 µm = 20 kb. Relative Rev3l mRNA level normalized to GAPDH mRNA level is shown (top panel). Distribution of fork speeds (kb/min) and fork ratios (IdU/CldU track length) are shown in dot plots for SatIII and global DNA (bottom panel). The number of fibers analyzed is indicated in (n). Bars represent the median ± interquartile range (Mann–Whitney test. ns: not significant, *P < 0.05; **P < 0.01, ***P < 0.001 and ****P < 0.0001). The presented data are representative of three biological repeats.

B). Asynchronous Rev3l +/+ and Rev3l −/− MEFs were fixed with PFA then subjected to in situ proximity ligation assay (PLA) using 53BP1 and HP1α antibodies; then, PLA foci were counted in both cell lines (more than 150 nuclei for each condition were counted). P-values were calculated by Mann–Whitney test (****P < 0.0001). Red lines indicate the mean values. Error bars: SEM. Controls with a single antibody are also shown. Experiments were repeated three times. Representative images are shown. Scale bar = 5 µm.

C). Asynchronous Rev3l +/+ and Rev3l −/− MEFs were subjected to PLA as by using γH2AX and HP1β antibodies and processed as in (B). P-values were calculated by Mann–Whitney test (*P < 0.05). Red lines indicate the mean values. Error bars: SEM. Controls with a single antibody are also shown. Three independent experiments were performed.

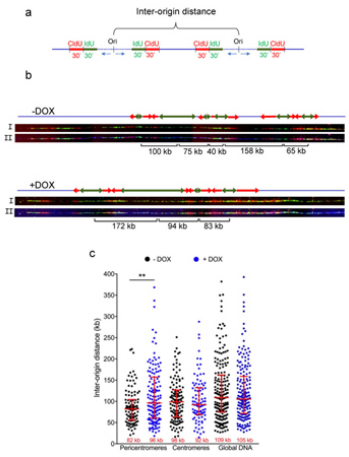
D). RPE cells were transfected with non-targeting siRNA (siNT) or siRNA against Rev3l; then, 72 h later cells were subjected to PLA by using 53BP1 and HP1α antibodies and processed as in (B). P-values were calculated by Mann–Whitney test (****P < 0.0001). Red lines indicate the mean values. Error bars: SEM. Three independent experiments were performed.

E). HeLa cells were transfected with non-targeting siRNA (siNT) or siRNA against Rev3l; then, 72 h later cells were

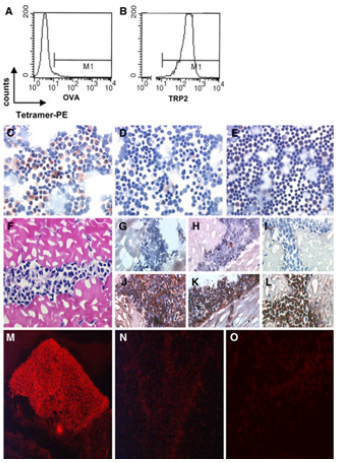
subjected to PLA by using 53BP1 and HP1α antibodies and processed as in (B). P-values were calculated by Mann–Whitney test (***P < 0.001). Red lines indicate the mean values. Error bars: SEM. Three independent experiments were performed.

F). Rev3l +/+ and Rev3l −/− MEFs were incubated with or without 0.23 μM aphidicolin for 24 h before metaphase spreading. FISH was performed using major satellite probe to quantify breaks in pericentromeric regions (F). Representative images of chromosomes showing abnormalities (see arrows) in pericentromeric regions from Rev3l −/− MEFs. Chromosomes were labeled with DAPI, and breaks in non-pericentromeric regions were quantified (G). Error bars indicate standard error of the mean for three independent experiments. Mann–Whitney test (ns: not significant, *P < 0.05; ***P < 0.001).

Fig 6. PMID: 34533226



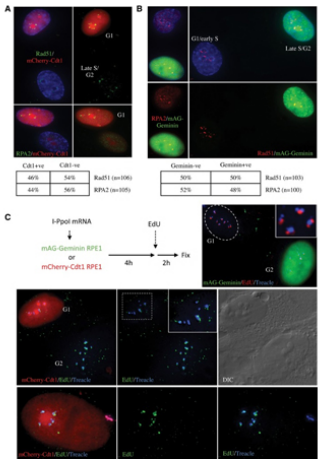
Fluorescence in situ Hybridization (FISH)
Origin of replication density in shTERF2-expressing HeLa cells. (a) Scheme showing the experimental setting used to measure the distance between two origins of replication (inter-origin distance; IOD); (b) Representative images of DNA combing at pericentromeres showing only the signal of IdU (green), IdU (red) top image (I) or with satellite III PNA probe signal (blue) bottom image (II). Green and red arrows indicate IdU and CldU labeling, respectively. IOD distance is shown below the images; (c) Quantification of IOD expressed in kilobases (kb) for HeLa cells expressing a doxycycline (DOX)-inducible shTERF2 system. Median length is shown at the bottom of the scatter plots. Bars represent the median +/− interquartile range (** p < 0.001; Mann–Whitney U test). Fig 2. PMID: 33804994



Immunofluorescence Microscopy

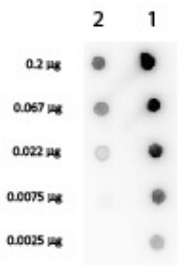
In situ detection of antigen-specific T cells. Flow cytometric analysis of tetramer binding by LP9 T cells, control tetramer H-2Kb-OVA (a) and relevant tetramer H-2Kb-TRP2180 (b). Positive staining of a cytological preparation containing LP9 cells and normal C57BL splenocytes was only observed with H-2Kb-TRP2180 tetramer (c) and not without tetramer (negative control) (d). Staining of normal splenocytes with H-2Kb-TRP2180 tetramer did not result in a positive signal (e). H&E-stained section of LP9-containing muscle tissue (f). Improved morphology and signal to noise ratios of in situ detection of antigen specific T cells in LP9-containing muscle tissue sections stained histochemically with specific tetramers (j–l) or negative control solution (without tetramer) (g–i) using the ABC-peroxidase kit with AEC (red-brown staining) as substrate. g, j Without blocking with normal goat serum and PFA-fixation prior to staining. h, k With normal goat serum blocking but without PFA-fixation prior to staining. i, l With blocking with normal goat serum and PFA-fixation prior to staining. LP9-containing muscle tissue sections stained with or without tetramers with fluorescent microscopy visualization. Positive staining was observed after incubation with specific H-2Kb-TRP2180 tetramers (m) and not without the addition of tetramer (n) or after incubation with control tetramer H-2Kb-OVA. Fig 1.

PMID: 17440724



Immunofluorescence Microscopy

HR factors are recruited, and damage-induced DNA synthesis can be observed at I-PpoI-induced nucleolar caps in G1 cells. (A) I-PpoI transfection of RPE1 cells stably expressing FUCCI component mCherry-Cdt1 reveals that HR factors Rad51 and RPA2 are recruited comparably to nucleolar caps in G1 (red) and late S/G2 (nonred) cells. Quantification is shown below. (B) I-PpoI transfection of RPE1 cells stably expressing FUCCI component mAG-Geminin reveals that HR factors Rad51 and RPA2 are recruited comparably to nucleolar caps in G1 (nongreen) and late S/G2 (green) cells. Quantification is shown below. (C) RPE1 cells stably expressing FUCCI component mAG-Geminin or mCherry-Cdt1 were transfected with I-PpoI mRNA; 4 h after transfection, fresh medium containing EdU was added to cells. Following a 2-h pulse of EdU labeling, cells were fixed. Treacle antibodies detected damage-induced nucleolar caps. Damage-induced DNA synthesis was visualized using biotin-azide and fluorophore-conjugated streptavidin (see the Materials and Methods for details). In the top right panel, EdU incorporation can be observed at damage-induced nucleolar caps in G1 (nongreen) mAG-Geminin cells. In the middle panels, EdU incorporation is observed in nucleolar caps in both G1 (red) and G2 (nonred) mCherry-Cdt1 cells. A DIC image is shown at the right. In the bottom panels, a single enlarged G1 cell from the same experiment is shown. Fig 6. PMID: 26019174



Dot Blot

Dot Blot of Rabbit anti-Streptavidin Biotin Conjugated. Antigen: Lane 1 - Biotin conjugated Streptavidin Antibody. Lane 2 - Streptavidin Antibody. Load: 3-fold serial dilution starting at 200 ng. Secondary antibody: HRP Streptavidin at 1:40,000 for 60 min at RT. Block: 1% BSA-TTBS 30 min at RT.

References

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