

ANTIGENIX AMERICA Inc.
1-800-558-1008
PRODUCT INFORMATION SUMMARY

STREPTAVIDIN CONJUGATES

Streptavidin-FITC	Cat. No.	S100130	100 Tests
Streptavidin-R-PE	Cat. No.	S100170	100 Tests
Streptavidin-Texas Red	Cat. No.	S100140	100 Tests (0.5 mL)
Streptavidin-APC	Cat. No.	S100160	50 Tests
Streptavidin-HRP	Cat. No.	S100180	1.0 mL
Streptavidin-Alk. Phos.	Cat. No.	S100190	1.0 mL

DESCRIPTION:

Streptavidin has a unique property of binding with biotin, a small molecule of the vitamin B complex, with an extremely high affinity. Streptavidin is a protein molecule with a molecular weight of 55 kDa, which can also be coupled to proteins and enzymes, and has several binding sites, so it can be used to bridge biotinylated molecules. These properties have been utilized for an adjunct system in immunologic and serologic procedures which can result in assays of increased sensitivities and low background levels.

CONJUGATION:

Fluorescein isothiocyanate; R-Phycoerythrin; Allo-Phyco-Cyanin; Texas Red (Sulforhodamine), Horseradish Peroxidase, Alkaline Phosphatase.

RESEARCH APPLICATION:

Indirect immunofluorescence or immunoenzymatic staining with biotin-conjugated antibodies or probes.
Multi-color immunofluorescence analysis.
Amplification of fluorescence immunoassay.

HANDLING AND STORAGE:

All Streptavidin conjugates are supplied as liquid form at a suitable concentration for 100 tests per mL. All preparations contain 0.1% sodium azide (**except HRP conjugates**) and should be **STORED DARK** at 2-8° C when not in use. **DO NOT FREEZE.** Use **10 uL per test** to stain no more than one million biotin-labelled cells. Reagent may be further diluted with PBS (0.01M, pH 7.0) (**with EXCEPTION of Alk. Phosphatase conjugate**) for histochemistry or other applications. Dilutions should be made to portion of reagent that will be used on day of use.

PRODUCT USE:

Streptavidin-HRP: Provided as approx. 0.7 mg/mL

Several detection substrates for HRP exist. An insoluble substrate can be prepared by mixing 40 mL of 50 mM sodium phosphate pH 7.0, containing 0.15 M sodium chloride with 5 mL of methanol containing 10 mg of 3-3' Diaminobenzidine (DAB) and 30 mg of 4-chloronaphthol. Just prior to use, 10 uL of 30% hydrogen peroxide is added. **Inhibitors of HRP include azide, fluoride, cyanide and sulfide ions.** Also, hemoglobin, bilirubin, ascorbate and catalase are examples of compounds that react with hydrogen peroxide and may interfere with color development.

References:

Kincaid, R.L. and M.S. Nightingale. A rapid non-radioactive procedure for plaque hybridization using biotinylated probes. **BioTechniques** 6:42-49; 1988.

Streptavidin-Alkaline Phosphatase:

Supplied as a stabilized solution, approximately 0.7 mg in BSA with 50 mM tris-HCL, pH 8.0, 2 mM MgCl₂ and 0.05% sodium azide. Dilute only portion that will be used on day of testing, as loss of activity may occur over several weeks after dilution. **Inhibitors of Alk. Phos.** include organic or inorganic phosphates, chelators of metal ions, and many amino acids. Use of PBS should be avoided in ELISA.

Measurement of Alk. Phos. activity is based upon the hydrolysis of the phosphate ester of p-nitrophenol (PNPP) to the yellow end-product PNP, and phosphate. Measurement increase in absorbance at 405 nm. Dilute the streptavidin-Alk. Phos. with buffer (Avoid PBS) to concentration suitable for particular application.

One substrate that may be used: 10 mL of 100 mM tris HCL, pH 9.5; 100 mM NaCl, 5 mM MgCl₂. ; 66 uL of 50 mg/mL nitrobluetetrazolium in 70% dimethylformamide (stored at 4°C). ; 33 uL of 50 mg/mL 5-bromo-4-chloro-3-indolyl-phosphate in demethylformamide (Stored at 4° C. (Blake et al, 1984).

References:

Blake, et al. A rapid, sensitive method for detection of alk. phos. conjugated antibody on Western Blots. **ANALYT. BIOCHEM.**, 136:175-179 (1984).

Kincaid, R.L., et al, A rapid non-radioactive procedure for plaque hybridization using biotinylated probes..**BIOTECHNIQUES** 6:42-49 (1988)

Streptavidin-Texas Red: Supplied in PBS, approx. 0.6 mg, with 0.1 % sodium azide. Store dark, DO NOT FREEZE.

FOR RESEARCH USE ONLY. NOT INTENDED FOR THERAPEUTIC OR DIAGNOSTIC USE.