Streptavidin Fluorescent Conjugates

Catalog No.	Streptavidin Fluorescent Conjugate	Concentration	Volume
NEL720	Streptavidin-Fluorescein	1 mg/ml	1 ml
NEL721	Streptavidin-Texas Red®	1 mg/ml	1 ml
NEL722	Streptavidin-Coumarin	1 mg/ml	1 ml

Introduction

Fluorescence detection is becoming one of the most powerful tools in research laboratories. As equipment (e.g. fluorescence microscopes, CCD cameras, imaging software) to measure signals becomes more sophisticated, fluorescence technology is becoming more widespread.

The streptavidin fluorescent conjugates offered by NEN Research Products have been successfully used in fluorescent immunohistochemistry and *in situ* hybridization. More specifically, these conjugates are compatible with the **TSA-Indirect** kit (NEL700), which is a signal amplification system (1-6) for immunohistochemistry. The panel of fluorescent conjugates allows for multicolor fluorescence detection. Streptavidin-fluorescein gives a greenish yellow color, streptavidin-Texas Red® gives a red color and streptavidin-coumarin gives a blue color.

The following is a table of excitation and emission wavelengths for fluorescein, Texas Red® and coumarin:

Fluorophore	Excitation	Emission
fluorescein	494 nm	517 nm
Texas Red®	593 nm	612 nm
coumarin	402 nm	443 nm

Preparation of Conjugates

The conjugates are prepared by reacting streptavidin and the appropriate activated fluor. The fluorescent conjugate is purified by gel filtration and evaluated for fluor/streptavidin ratio. A fluor/streptavidin ratio of greater than 1 has given excellent results in immunohistochemistry applications.

Composition

The streptavidin fluorescent conjugates are stored in a phosphate buffer containing BSA and sodium azide. The conjugates are at a concentration of 1 mg/ml.

Stability and Storage

The products are shipped on blue ice and should be stored at 4°C upon receipt. Under the proper storage conditions the fluorescent conjugates will be stable for 6 months.

References

(1) Bobrow, MN, Harris, TD, Shaughnessy, KJ, and Litt, GJ, (1989) Catalyzed reporter deposition, a novel method of signal amplification, Application to immunoassays, J. Immunol. Meth. 125, 279–285.

(2) Bobrow, MN, Shaughnessy, KJ, Litt, GJ, (1991) Catalyzed reporter deposition, a novel method of signal amplification, II. Application to membrane immunoassays, J. Immunol. Meth. 137, 103– 112.

(3) Adams, JC, (1992) Biotin Amplification of Biotin and Horseradish Peroxidase Signals in Histochemical Stains, J. Histochem. Cytochem. 40, 1457–1463.

(4) Berghorn, KA, Bonnett, JH, Hoffman, GE, (1994) cFos Immunoreactivity is Enhanced with Biotin Amplification, J. Histochem. Cytochem. 42, 1635–1642.

(5 Raap, AK, van de Corput, MPC, Vernenne, RAW, van Gijlswijk, RPM, Tanke, HJ, Wiegant, J, (1995) Ultra-Sensitive FISH using Peroxidase-Mediated Deposition of Biotin-or Fluorochrome Tyramides, Human Mol Genet 4, 529-534.

(6) Kerstens, HMJ, Poddighe, PJ, Hanselaar, AGJM, (1995) A Novel *in situ* Hybridization Signal Amplification Method, based on the Deposition of Biotinylated Tyramine, J. Histochem. Cytochem. 43/4, 347-352.

Hazard Information

This product is considered to be non-hazardous. Although the product is classified as non-hazardous, we strongly recommend using prudent laboratory practices: avoiding unnecessary contact, use of gloves, eye protection, lab coats, etc. when using this or any laboratory reagent.