

Expanded NEUROBIOTIN™ Family



New Compounds = New Research Tools = New Discoveries

NEUROBIOTIN™ Tracer (Cat. No. SP-1120) manufactured by Vector Labs is a widely recognized and well-referenced intracellular labeling reagent. Primary characteristics that have made this product so popular include high solubility, net positive charge, fixable amine, low molecular weight and subsequent ease of detection with a (strept)avidin enzyme or fluorophore conjugate for visualization and image capture. Recent surveys underscored the need for additional products possessing characteristics like NEUROBIOTIN™ Tracer with potential further versatility. To address those needs, we have synthesized several new compounds that should help further neural pathway studies:

NEUROBIOTIN™ 488 **SP-1125** **2 mg**

This is an amine containing derivative of biotin conjugated with a bright green fluorophore that is readily transported along axons and fine projections. It can be viewed directly via fluorescence and/or detected with a choice of (strept)avidin reagents for light microscopy and archiving of the preparation. It is compatible with patch clamp applications and pressure injection methods. NEUROBIOTIN™ 488 has a net negative charge.

NEUROBIOTIN™ 350 **SP-1155** **2 mg**

Similar in structure to NEUROBIOTIN™ 488, NEUROBIOTIN™ 350 is also an amine containing biotin derivative. However, it is conjugated with a bright blue fluorophore that would contrast with other green or red fluorescent markers or reagents present in the same preparation. For administration purposes NEUROBIOTIN™ 350 has a net positive charge and is highly soluble in a number of commonly used buffer and salt solutions.

NEUROBIOTIN™-Plus **SP-1150** **5 mg**

Investigators have identified rapid degradation of injected tracers such as biocytin due to the presence of biotinidase activity in brain tissue*. This loss of stability of the tracer significantly reduces the viable postinjection period and may compromise complete detection of a neural network. NEUROBIOTIN™-Plus was designed to be impervious to cleavage and breakdown by biotinidase. This newly synthesized biotin-containing compound contains fixable amine groups, is highly soluble and has a low molecular weight. These characteristics make it an ideal candidate for experiments requiring long postinjection survival times and optimal uptake along the entire neural tract.

*Mishra, A. et al (2010) *ACS Chem. Neurosci.* 1:129-138.