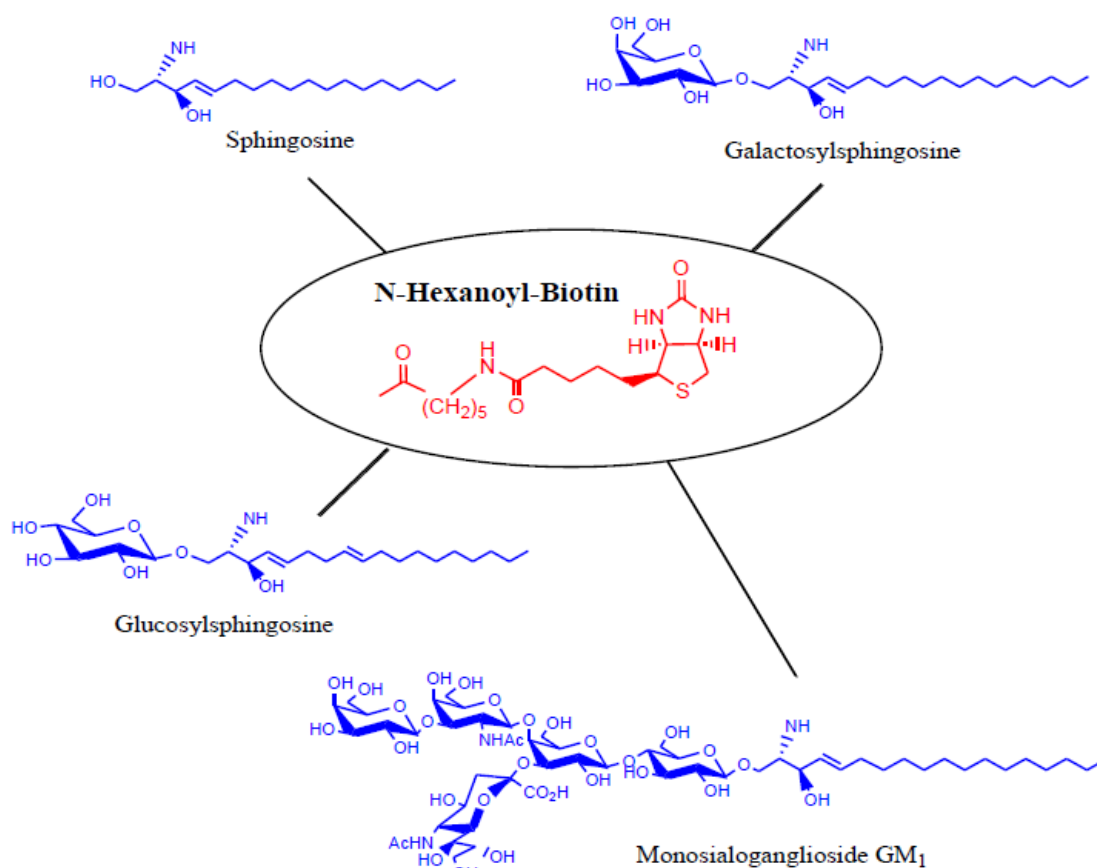


Biotinylated Sphingolipids



Matreya's new line of biotinylated sphingolipids are ideal for use in sphingolipid research, taking advantage of the strong and specific interaction of biotin with streptavidin/avidin. These sphingolipid analogs contain a biotin label attached to the amine of the sphingosine moiety via a hexanoic acid linker which maintains the sphingolipid's natural properties. The biotin label allows for easy attachment of the sphingolipid to streptavidin/avidin proteins making them extremely useful for binding to substrates and for toxin detection. Matreya's biotinylated products combine the natural ceramide backbone, for a more natural protein interaction, with a biotin label for very specific streptavidin/avidin binding.

Mukhopadhyay and coworkers identified the inhibitor 2 of protein phosphatase 2A (I2PP2A) as a ceramide binding protein using biotin-labeled ceramide. They found that I2PP2A-ceramide binding decreased the association between PP2A and the inhibitor, preventing the inhibition of PP2A activity *in vitro*. They also found that the direct interaction of I2PP2A with ceramide plays important biological roles *via* the regulation of PP2A activity and signaling, which in turn controls ceramide-mediated degradation of c-Myc and antiproliferation.¹

Pukin and coworkers used biotin labeled ganglioside analogs for *Escherichia coli* enterotoxin detection on streptavidin-coated ELISA plates.² Enterotoxigenic *Escherichia coli* is a pathogenic form of bacteria that is a serious threat to health and food safety around the world and the detection of enterotoxins is of critical importance in preventing food born diseases.

References:

1. A. Mukhopadhyay et al. FASEB 23:3 (2009) 751-763
2. A. Pukin et al. Org. Biomol. Chem. 9:16 (2011) 5809-5815

<u>Product Name</u>	<u>Catalog #</u>	<u>Amount</u>	<u>Purity</u>
N-Hexanoyl-biotin-D-erythro-sphingosine	2081	5 mg	98+%
N-Hexanoyl-biotin-galactosylceramide	2203	5 mg	98+%
N-Hexanoyl-biotin-glucosylceramide	2085	5 mg	98+%
N-Hexanoyl-biotin-monosialoganglioside GM ₁	2053	500 µg	98+%