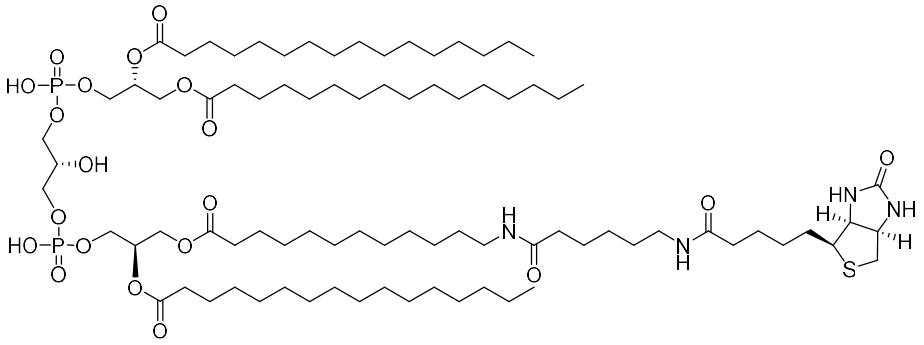
Biotin Cardiolipin (Biotin-CL)

Catalog number: L-C16B



Molecular Formula: $C_{85}H_{160}N_4O_{20}P_2S$

MW: 1652.2

CAS#: n/a

Solubility: Methanol, >1 mg/mL

Storage and Handling: Biotin Cardiolipin (biotin-CL) is stable for at least one year when stored as a solid, protected from moisture, and light at -20°C. Reconstitute with methanol and dilute with water or neutral pH, buffered salt solutions, i.e. PBS, TBS, etc. Storage in basic (pH > 9) or acidic (pH < 4) buffers will result in slow decomposition of the product. After reconstitution, solutions of biotin-CL should be stored at -20°C between uses.

Background: Cardiolipin is an important component in prokaryotic and in eukaryotic inner mitochondrial membrane.[1] In humans, CL is made by cardiolipin synthase from phosphatidylglycerol and cytidinediphosphate-diacylglycerol. [2] Due to its four acyl chains and small head group, CL can organize into domains which can be proton sinks, fill cavities at protein interfaces, stabilize protein oligomers, and participate in high-curvature membrane regions. Autoantibodies to CL have been found in patients with anti-phospholipid syndrome and lupus[3]. Biotinylated lipids have been used in microplate and bead-based assays and affinity experiments.

References: 1. Schlame M, Horvath L, Vigh L. Relationship between lipid saturation and lipid-protein interaction in liver mitochondria modified by catalytic hydrogenation with reference to cardiolipin molecular species. Biochem J 1990;265:79-85.
2. Houtkooper RH, Vaz FM. Cardiolipin, the heart of mitochondrial metabolism. Cell Mol Life Sci 2008;65:2493-506.
3. McNeil HP, Simpson RJ, Chesterman CN, Krilis SA. Anti-phospholipid antibodies are directed against a complex antigen that includes a lipid-binding inhibitor of coagulation: beta 2-glycoprotein I (apolipoprotein H). Proc Natl Acad Sci USA 1990;87:4120-4.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

Ph: 866-588-0455 Fax: 801-588-0497 **echelon-inc.com**