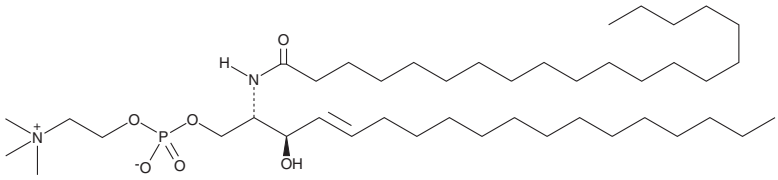
PRODUCT INFORMATION

C20 Sphingomyelin (d18:1/20:0)

Item No. 24450

CAS Registry No.:	121999-68-6
Formal Name:	4-hydroxy-7S-[(1R,2E)-1-hydroxy-2-hexadecen-1-yl]-N,N,N-trimethyl-9-oxo-3,5-dioxa-8-aza-4-phosphaoctacosan-1-aminium, 4-oxide, inner salt
Synonyms:	N-eicosanoyl-D-*erythro*-Sphingosylphosphorylcholine, SM(d18:1/20:0)
MF:	$C_{43}H_{87}N_2O_6P$
FW:	759.2
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

C20 Sphingomyelin (d18:1/20:0) is supplied as a solid. A stock solution may be made by dissolving the C20 sphingomyelin (d18:1/20:0) in the solvent of choice. C20 Sphingomyelin (d18:1/20:0) is soluble in ethanol, methanol, and a 14:1 solution of chloroform:methanol. *As this product is derived from a natural source, there may be variations in the sphingoid backbone.*

Description

C20 Sphingomyelin is a naturally occurring sphingolipid.[1-4] Levels of C20 sphingomyelin are upregulated in the hippocampus of rats with diabetes induced by streptozotocin (Item No. 13104) and in human plasma where it is positively correlated with insulin resistance in obese humans.[2] C20 sphingomyelin is also upregulated in the liver of a mouse model of Niemann-Pick type C1 disease, a neurodegenerative cholesterol-sphingolipid lysosomal storage disorder.[1] The plasma concentration of C20 sphingomyelin is decreased in men with prostate cancer.[3]

References

1. Praggastis, M., Tortelli, B., Zhang, J., *et al.* A murine Niemann-Pick C1 I1061T knock-in model recapitulates the pathological features of the most prevalent human disease allele. *J. Neurosci.* **35(21)**, 8091-8106 (2015).
2. Hanamatsu, H., Ohnishi, S., Sakai, S., *et al.* Altered levels of serum sphingomyelin and ceramide containing distinct acyl chains in young obese adults. *Nutr. Diabetes* **4(10)**, e141 (2014).
3. Awwad, H.M., Ohlmann, C.H., Stoeckle, M., *et al.* Choline-phospholipids inter-conversion is altered in elderly patients with prostate cancer. *Biochimie* **126**, 108-114 (2016).
4. Fiedorowicz, A., Prokopiuk, S., Zendzian-Piotrowska, M., *et al.* Sphingolipid profiles are altered in prefrontal cortex of rats under acute hyperglycemia. *Neuroscience* **256**, 282-291 (2014).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM