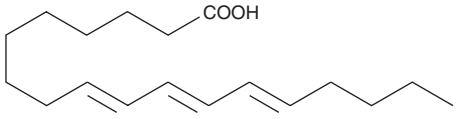
PRODUCT INFORMATION

β-Eleostearic Acid

Item No. 22976

CAS Registry No.:	544-73-0
Formal Name:	9E,11E,13E-octadecatrienoic acid
Synonyms:	β-ESA, FA 18:3, 9(E),11(E),13(E)-Octadecatrienoic Acid
MF:	$C_{18}H_{30}O_2$
FW:	278.4
Purity:	≥97%
UV/Vis.:	λ_{max}: 258, 268, 279 nm
Supplied as:	A solution in methanol
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

β-Eleostearic acid (β-ESA) is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of β-ESA in these solvents is approximately 20, 10, and 30 mg/ml, respectively.

Description

β-ESA is a conjugated polyunsaturated fatty acid that is found in plant seed oils and in mixtures of conjugated linolenic acids synthesized by the alkaline isomerization of linolenic acid.[1] It reduces growth of Caco-2 colon cancer cells in a dose-dependent and time-dependent manner. *In vitro*, β-ESA induces DNA fragmentation and upregulation of pro-apoptotic Bax mRNA. β-ESA decreases protein expression of the apoptosis suppression factor Bcl-2 and induces apoptosis in T24 bladder cancer cells *via* production of reactive oxygen species.[2] It also inhibits bacterial fatty acid dioxygenase with a K_i value of 49 nM *in vitro*.[3]

References

1. Yasui, Y., Hosokawa, M., Kohno, H., *et al.* Growth inhibition and apoptosis induction by all-trans-conjugated linolenic acids on human colon cancer cells. *Anticancer Res.* **26(3A)**, 1855-1860 (2006).
2. Sun, Z., Wang, H., Ye, S., *et al.* Beta-eleostearic acid induce apoptosis in T24 human bladder cancer cells through reactive oxygen species (ROS)-mediated pathway. *Prostaglandins Other Lipid Mediat.* **99(1-2)**, 1-8 (2012).
3. Mashhadi, Z., Boeglin, W.E., and Brash, A.R. Robust inhibitory effects of conjugated linolenic acids on a cyclooxygenase-related linoleate 10S-dioxygenase: Comparison with COX-1 and COX-2. *Biochim. Biophys. Acta* **1851(10)** (2015).

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