Vitamin E (Alpha-Tocopherol)

Catalogue No.:abx082409

(+)-α-Tocopherol is a small molecule. Tocopherols are methyl-substituted hydroxychromans with a phytyl side chain. This product is semisynthetic. It is isolated from naturally occurring α-tocopherol found in vegetable oil. It is prepared using a by-product of the vegetable oil process called vegetable oil distillate (VOD) as its raw material. Soybean oil is used as a solvent in this process. α-Tocopherol is a powerful inhibitor of the proliferation of estrogen receptor positive and estrogen receptor negative human breast cancer cell lines in a dose dependent manner in vitro. Treatment at 15 µg/ml for 24 hours inhibited MDA-MB-435 cell proliferation by 71%. However, cells treated with this level of α-tocopherol exhibited reduced viability (81% vs. 96% for control cells). This product has been shown to interact with cytosolic Protein Kinase C in vascular smooth muscle cells. A review of various published research studies suggests that this product may help ward off heart attacks. α-Tocopherol is carried with LDLs and shields LDL from oxidation by free radicals. This protection leads to a decrease in LDL oxidation, which is a major cause in triggering artery stenosis. Artery blockage is due to immune cells engulfing oxidized LDL, which causes swelling and accumulation of fatty masses within the artery walls. Vitamin E may help prevent this. Isolation and analysis of tocopherols can be easily performed by a simple acetone extraction followed by HPLC.6 A C18 ODS2 column is packed with 3 µm particles and a methanol : water (99:1) mobile phase is used for isolation, resulting in detection and easy measurement of α-, δ-, and γ-tocopherol peaks. Fluorescence detection was performed with 290 nm excitation and 330 nm emission wavelengths.

Target:	Vitamin E (Alpha-Tocopherol)
Conjugation:	Unconjugated
Storage:	Store at room temperature.
Molecular Weight:	430.7 Da
Molecular Formula:	$C_{29}H_{50}O_2$
Buffer:	Not applicable.
CAS Number:	59-02-9
Biological Activity:	Type VI, approx. 1000 IU/g
Note:	THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC, THERAPEUTIC OR COSMETIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION.

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