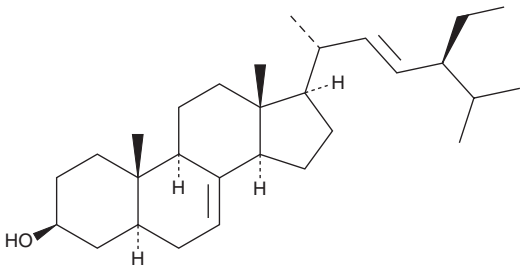
PRODUCT INFORMATION

α-Spinasterol

Item No. 14197

CAS Registry No.:	481-18-5
Formal Name:	(3β,5α,22E)-stigmasta-7,22-dien-3-ol
Synonyms:	Bessisterol, Hitodesterol
MF:	$C_{29}H_{48}O$
FW:	412.7
Purity:	≥95%
Supplied as:	A crystalline 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

α-Spinasterol is supplied as a crystalline solid. A stock solution may be made by dissolving the α-spinasterol in the solvent of choice. α-Spinasterol is soluble in organic solvents such as ethanol and dimethyl formamide, which should be purged with an inert gas. The solubility of α-spinasterol in these solvents is approximately 0.25 and 1 mg/ml, respectively.

Description

α-Spinasterol is a bioavailable phytosterol originally isolated from spinach that acts as an antagonist at the transient receptor potential vanilloid type 1 (TRPV1) receptor (IC_{50} = 1.4 µM).[1,2] It has antinociceptive effects in a noxious heat-induced pain test and also reduces hyperalgesia and edema in a complete Freund's adjuvant-induced inflammatory pain test in mice at a dose of 0.3 µmol/kg. α-Spinastrerol increases the seizure threshold in a dose-dependent manner and reduces depressive-like behavior in mice.[3,4] It also has anti-inflammatory activity *in vivo* and inhibits benign prostatic hyperplasia in rats.[5,6]

References

1. Hart, M.C. and F.W. Heyl. Spinasterol and some of its esters. *J. Biol. Chem.* **95(1)**, 311-315 (1931).
2. Trevisan, G., Rossato, M.F., Walker, C.I., *et al.* Identification of the plant steroid α-spinasterol as a novel transient receptor potential vanilloid 1 antagonist with antinociceptive properties. *J. Pharmacol. Exp. Ther.* **343(2)**, 258-269 (2012).
3. Socala, K., Nieoczym, D., Pieróg, M., *et al.* α-Spinasterol, a TRPV1 receptor antagonist, elevates the seizure threshold in three acute seizure tests in mice. *J. Neural. Transm. (Vienna)* **122(9)**, 1239-1247 (2015).
4. Socala, K. and P. Wlaź. Evaluation of the antidepressant and anxiolytic-like activity of α-spinasterol, a plant derivative with TRPV1 antagonistic effects, in mice. *Behav. Brain Res.* **303**, 19-25 (2016).
5. Borges, F.R., Silva, M.D., Córdova, M.M., *et al.* Anti-inflammatory action of hydroalcoholic extract, dichloromethane fraction and steroid α-spinasterol from *Polygala sabulosa* in LPS-induced peritonitis in mice. *J. Ethnopharmacol.* **151(1)**, 144-150 (2014).
6. Lee, M.-Y., Shin, I.-S., Kyoung, H., *et al.* α-Spinasterol from *Melandrium firmum* attenuates benign prostatic hyperplasia in a rat model. *Mol. Med. Rep.* **9(6)**, 2362-2366 (2014).

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