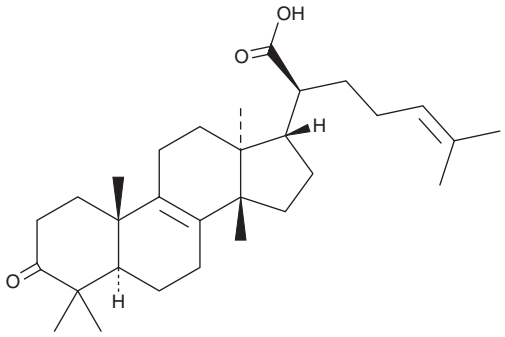
PRODUCT INFORMATION

β-Elemonic Acid

Item No. 11712

CAS Registry No.:	28282-25-9
Formal Name:	3-oxo-(13α,14β,17α,20S)-lanosta-8,24-dien-21-oic acid
Synonyms:	Elemadienonic Acid, 3-Oxotirucallenoic Acid, 3-oxo Tirucallic Acid
MF:	$C_{30}H_{46}O_3$
FW:	454.7
Purity:	≥98%
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

β-Elemonic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the β-elemonic acid in the solvent of choice, which should be purged with an inert gas. β-Elemonic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of β-elemonic acid in ethanol and DMSO is approximately 5 mg/ml and approximately 30 mg/ml in DMF.

β-Elemonic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, β-elemonic acid should first be dissolved in DMF and then diluted with the aqueous buffer of choice. β-Elemonic acid has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

β-Elemonic acid is a triterpene isolated from *Boswellia* (*Burseraceae*) that exhibits anticancer activity.[1,2] It inhibits growth of non-small cell lung cancer (NSCLC) A549 cells (IC_{50} = 6.92 µM) *in vitro*.[2] β-Elemonic acid induces apoptosis and cytotoxicity in A549 cells in a dose-dependent manner but has no effect on normal epithelial WI-38 cells. It inhibits phosphorylation of p42/44, MAPK/JNK, and p38 and induces production of reactive oxygen species (ROS) and COX-2 expression *in vitro*. β-Elemonic acid also inhibits prolyl endopeptidase (IC_{50} = 39.74 µM) *in vitro*.[1]

References

1. Atta-ur-Rahman, Naz, H., Fadimatou, *et al.* Bioactive constituents from *Boswellia papyrifera*. *J. Biol. Chem.* **68(2)**, 189-193 (2005).
2. Wu, T.-T., Lu, C.L., Lin, H.I., *et al.* β-Elemonic acid inhibits the cell proliferation of human lung adenocarcinoma A549 cells: The role of MAPK, ROS activation and glutathione depletion. *Oncol. Rep.* **35(1)**, 227-234 (2016).

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