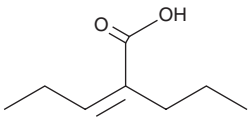
PRODUCT INFORMATION

(E,Z)-2-propyl-2-Pentenoic Acid

Item No. 19591

CAS Registry No.: 60218-41-9
Formal Name: 2-propyl-2-pentenoic acid
Synonyms: 2-propyl-2-Pentenoate, 2-Propylpenten-2-oic Acid, 2-ene-VPA
MF: $C_8H_{14}O_2$
FW: 142.2
Purity: ≥98%
UV/Vis.: λ_{max}: 216 nm
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

(E,Z)-2-propyl-2-Pentenoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the (E,Z)-2-propyl-2-pentenoic acid in the solvent of choice. (E,Z)-2-propyl-2-Pentenoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of (E,Z)-2-propyl-2-pentenoic acid in these solvents is approximately 30, 20, and 15 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (E,Z)-2-propyl-2-pentenoic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (E,Z)-2-propyl-2-pentenoic acid in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(E,Z)-2-propyl-2-Pentenoic Acid is a mixture of (E)-2-propyl-2-pentenoic acid and (Z)-2-propyl-2-pentenoic acid and an active metabolite of the class I histone deacetylase (HDAC) inhibitor valproic acid (Item Nos. 35739 | 13033).[1] (E)-2-propyl-2-Pentenoic acid (100 mg/kg) increases the seizure threshold in the maximal electroshock seizure threshold (MEST) test in mice.[2]

References

1. Rettenmeier, A.W., Gordon, W.P., Prickett, K.S., *et al.* Metabolic fate of valproic acid in the rhesus monkey. Formation of a toxic metabolite, 2-n-propyl-4-pentenoic acid. *Drug Metab Dispos* **14(4),** 443-453 (1986).
2. Löscher, W., Hönack, D., Nolting, B., *et al.* Trans-2-en-valproate: Reevaluation of its anticonvulsant efficacy in standardized seizure models in mice, rats and dogs. *Epilepsy Res.* **9(3),** 195-210 (1991).

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