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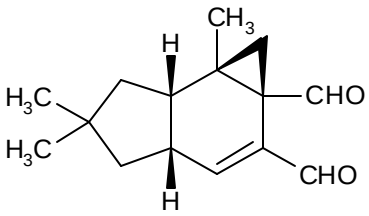
ProductInformation

Isovelleral
Product Number **I1279**
Storage Temperature: –20°C

CAS No. 37841-91-1



Product Description
CAS Number: 37841-91-1
Molecular Formula: $C_{15}H_{20}O_2$
Molecular Weight: 232.32 (anhydr.)

The best known vanilloid is capsaicin (M2028), extracted from capsicum chili peppers. This has long been known to activate fine afferent nerve fibers involved in pain transmission and in neurogenic inflammation. Nerve activation by capsaicin evokes sensations ranging from the perception of heat to burning pain. Activation is followed by loss of further sensitivity to capsaicin, insensitivity to noxious stimuli and loss of the ability to release neurochemicals involved in neurotransmission and in inflammation. Ultimately, capsaicin can cause neurotoxicity, especially when given experimentally to neonatal animals. This property has been extensively used to study the physiological function of the sensory nervous system.

The effects of vanilloids are mediated via a specific membrane receptor, the vanilloid receptor. There are specific physicochemical requirements for receptor activation and a selective antagonist capsazepine (C-191) is available. The receptor is coupled to a non-specific membrane cation channel, preferentially permeable to calcium and sodium ions. This channel is not affected by conventional ion channel blockers.

Protons have been proposed to be endogenous activators of the vanilloid receptor since there are several similarities between the action of capsaicin and that of protons on sensory nerve membranes. However, the endogenous ligand for the vanilloid receptor is as yet unresolved.

Isovelleral is a vanilloid receptor agonist. It interacts with vanilloid receptors on capsaicin-sensitive sensory neurons.

Preparation Instructions
Soluble in all organic solvents. Insoluble in water.

Storage/Stability
Store tightly sealed and protected from light at –20°C.

References
1. Szallasi, A. et al., Br. J. Pharmacol., **119**, 283-290 (1996).
2. Jerman, J.C. et al., Br. J. Pharmacol., **130**, 916-922 (2000).
3. Szallasi, A. et al., Mol. Pharmacol., **56**, 581-587(1999).

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