Print Date: Nov 13th 2018

Certificate of Analysis

www.tocris.com

Product Name: **Valerenic acid** **Catalog No.: 3048** **Batch No.: 1**

CAS Number: 3569-10-6

IUPAC Name: (2*E*)-3-[(4*S*,7*R*,7a*R*)-2,4,5,6,7,7a-Hexadydro-3,7-dimethyl-1*H*-inden-4-yl]-2-methyl-2-propenoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{22}O_2$

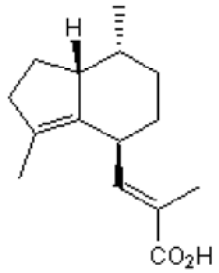
Batch Molecular Weight: 234.33

Physical Appearance: Colourless lyophilised solid

Solubility: Soluble in ethanol

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 133 - 136°C

HPLC: Shows >99.8% purity

Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: **Valerenic acid** **Catalog No.: 3048** **Batch No.: 1**

CAS Number: 3569-10-6

IUPAC Name: (2*E*)-3-[(4*S*,7*R*,7a*R*)-2,4,5,6,7,7a-Hexadydro-3,7-dimethyl-1*H*-inden-4-yl]-2-methyl-2-propenoic acid

Description:

Positive allosteric modulator of $GABA_A$ receptors that displays preference for receptors containing β_2 or β_3 subunits. Directly activates the receptor and blocks the channel at high concentrations. Displays sedative, anticonvulsant and anxiolytic activity in vivo. Also acts as a partial agonist of $5\text{-}HT_{5A}$ receptors.

Physical and Chemical Properties:

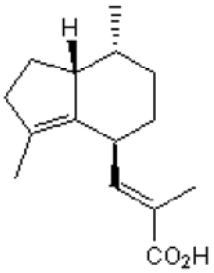
Batch Molecular Formula: $C_{15}H_{22}O_2$

Batch Molecular Weight: 234.33

Physical Appearance: Colourless lyophilised solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

Soluble in ethanol

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Khom *et al* (2016) Analysis of β-subunit-dependent $GABA_A$ receptor modulation and behavioral effects of valerenic acid derivatives. J.Pharmacol.Exp.Ther. ***357*** 580. PMID: 27190170.

Benke *et al* (2008) $GABA_A$ receptors as *in vivo* substrate for the anxiolytic action of valerenic acid, a major constituent of valerian root extracts. Neuropharmacology ***56*** 174. PMID: 18602406.

Khom *et al* (2007) Valerenic acid potentiates and inhibits $GABA_A$ receptors: molecular mechanism and subunit specificity. Neuropharmacol. ***53*** 178. PMID: 17585957.

Dietz *et al* (2005) Valerian extract and valerenic acid are partial agonists of the $5\text{-}HT_{5a}$ receptor in vitro. Brain Res.Mol.Brain Res. ***138*** 191. PMID: 15921820.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956