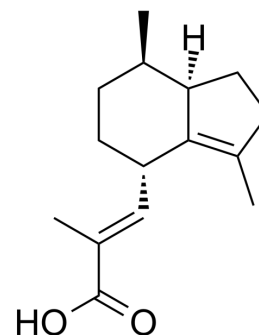


Valerenic acid

Cat. No.:	HY-103524
CAS No.:	3569-10-6
Molecular Formula:	C ₁₅ H ₂₂ O ₂
Molecular Weight:	234.33
Target:	GABA Receptor; 5-HT Receptor
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; GPCR/G Protein
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	Valerenic acid ((-)-Valerenic Acid), a sesquiterpenoid, is an orally active positive allosteric modulator of GABA _A receptors. Valerenic acid is also a partial agonist of the 5-HT _{5a} receptor. Valerenic acid mediates anxiolytic activity via GABA _A receptors containing the β3 subunit. Valerenic acid also exhibits potent antioxidant properties ^{[1][2][3]} .	
IC₅₀ & Target	GABA _A	5-HT _{5A} Receptor 17.2 μM (IC ₅₀)
In Vitro	Valerenic acid (1-100 μM) enhances the whole cell currents on GABA _A receptors expressed in HEK 293 cells ^[1] . Valerenic acid exhibits significant affinity for the 5-HT _{5a} receptor, with an IC ₅₀ of 17.2 μM (K _i =10.7 μM) ^[2] . [³ H]Valerenic acid binds to brain membranes reveals both a high affinity binding site (K _D =25 nM) and a low affinity site (K _D =16 μM) ^[1] . [³ H]Valerenic acid is displaced by Valerenol with high potency (IC ₅₀ =3 nM) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Valerenic acid (1-6 mg/kg i.p. or 10 mg/kg p.o.) decreases the aversion of wild type mice to the lit area ^[2] . Valerenic acid (10 mg/kg; p.o.) increases the proportion of time 129X1/SvJ mice spent onto the open arms ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

CUSTOMER VALIDATION

- J Med Chem. 2022 Feb 23.

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REFERENCES

[1]. Benke D, et, al. GABA A receptors as in vivo substrate for the anxiolytic action of valerenic acid, a major constituent of valerian root extracts. *Neuropharmacology*. 2009 Jan;56(1):174-81.

[2]. Dietz BM, et, al. Valerian extract and valerenic acid are partial agonists of the 5-HT_{5a} receptor in vitro. *Brain Res Mol Brain Res*. 2005 Aug 18;138(2):191-7.

[3]. Kara M, et, al. Ameliorative Effects of the Sesquiterpenoid Valerenic Acid on Oxidative Stress Induced in HepG2 Cells after Exposure to the Fungicide Benomyl. *Antioxidants (Basel)*. 2021 May 8;10(5):746.

[4]. Becker A, et, al. The anxiolytic effects of a Valerian extract is based on valerenic acid. *BMC Complement Altern Med*. 2014 Jul 28;14:267.

Caution: Product has not been fully validated for medical applications. For research use only.

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