Product Data Sheet

Product Name: Desvenlafaxine
Cat. No.: GC11570

Chemical Properties

Cas. No.	93413-62-8		
Chemical Name	4-[2-(dimethylamino)-1-(1-hydroxycyclohexyl)ethyl]phenol		
SMILES	CN(C)CC(C1=CC=C(C=C1)O)C2(CCCCC2)O		
Formula	$C_{16}H_{25}NO_2$	M.Wt	263.38
Solubility	≥ 13.2mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Desvenlafaxine		

Background

Desvenlafaxine is a serotonin (5-HT) and norepinephrine (NE) reuptake inhibitor with Ki of 40.2 nM and 558.4 nM, respectively. Target: SSRIsDesvenlafaxine is a serotonin-norepinephrine reuptake inhibitor and is the active metabolite of the antidepressant venlafaxine. Similar to venlafaxine, desvenlafaxine inhibits the neuronal uptake of serotonin and norepinephrine. Desvenlafaxine shows weak binding affinity (62% inhibition at 100 μM) at the human dopamine (DA) transporter. Desvenlafaxine inhibits [3H]5-HT or [3H]NE uptake for the hSERT or hNET with IC50 of 47.3 and 531.3 nM, respectively. Desvenlafaxine rapidly penetrates the male rat brain and hypothalamus. Desvenlafaxine significantly increases extracellular NE levels compared with baseline in the male rat hypothalamus but had no effect on DA levels using microdialysis [1]. Desvenlafaxine has the potential to inhibit CYP2D6, which could result in increased concentrations of drugs metabolized through this pathway. Induction of CYP3A4 is also possible with desvenlafaxine, which could impact the metabolism of drugs metabolized via this enzyme. Desvenlafaxine exhibits a linear and dose-proportional pharmacokinetic

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single-dose profile in a dose range from 100 to 600 mg/day. The absolute bioavailability of the oral formulation is 80.5% [2].

References:
[1]. Deecher, D.C., et al., Desvenlafaxine succinate: A new serotonin and norepinephrine reuptake inhibitor. J Pharmacol Exp Ther, 2006. 318(2): p. 657-65.
[2]. Sopko, M.A., Jr., M.J. Ehret, and M. Grgas, Desvenlafaxine: another "me too" drug Ann Pharmacother, 2008. 42(10): p. 1439-46.

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