Product Data Sheet

Product Name: (R)-SLV 319
Cat. No.: GC10028

Chemical Properties

Cas. No.	656827-86-0		
Chemical Name	3-(4-chlorophenyl)-N-[(4-chlorophenyl)sulfonyl]-4,5-dihydro-N'-methyl-4R-phenyl-1H-pyrazole-1-carboximidamide		
SMILES	C/N=C(\NS(=O)(=O)c1ccc(Cl)cc1)/N1N=C(c2ccc(Cl)cc2)[C@@H](C1)c1ccccc1		
Formula	$C_{23}H_{20}Cl_2N_4O_2S$	M.Wt	487.4
Solubility	≤30mg/ml in ethanol;30mg/ml in DMSO;30mg/ml in dimethyl formamide	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	(R)-SLV 319		

Background

Ki: 7.8 and 7943 nM for CB1 and CB2 receptors, respectively by SLV 319

(R)-SLV 319 is a CB1 receptor antagonist.

Central cannabinoid (CB1) receptor antagonists can be used in the treatment of various diseases including cognitive disorders, neuroinflammatory disorders, obesity, septic shock, psychosis, addiction, as well as gastrointestinal disorders.

In vitro: (R)-SLV 319 is the inactive enantiomer of SLV 319 with 100-fold less affinity for the CB1 receptor. SLV 319 was identified as a potent and selective CB1 receptor antagonist with Ki values of 7.8 and 7,943 nM for CB1 and peripheral cannabinoid (CB2) receptors, respectively. SLV 319 was found to be less lipophilic and thus more water soluble than other known CB1 receptor ligands [1,2].

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In vivo: A previous animal study examined the chronic effects of SLV 319 in hyperinsulinemic Zucker rats to determine their chronic effects on insulinemia. Results showed that R SLV 319 at 10 mg·kg-1·day-1 elicited body weight-independent improvements in insulinemia and glycemia during 10 wk of chronic treatment. Moreover, SLV 319 treatment caused glucose intolerance in CB1 but not SUR1-KO mice [3].

Clinical trial: So far, no clinical study has been conducted.

References:
[1] Lange, J. H.M.,Coolen, H.K.A.C.,van Stuivenberg, H.H., et al. Synthesis, biological properties, and molecular modeling investigations of novel 3,4-diarylpyrazolines as potent and selective CB1 cannabinoid receptor antagonists. Journal of Medicinal Chemistry 47(3), 627-643 (2004).
[2] Lange, J. H.M.,van Stuivenberg, H.H.,Veerman, W., et al. Novel 3,4-diarylpyrazolines as potent cannabinoid CB1 receptor antagonists with lower lipophilicity. Bioorganic & Medicinal Chemistry Letters 15, 4794-4798 (2005).
[3] Lynch CJ, Zhou Q, Shyng SL, Heal DJ, Cheetham SC, Dickinson K, Gregory P, Firnges M, Nordheim U, Goshorn S, Reiche D, Turski L, Antel J. Some cannabinoid receptor ligands and their distomers are direct-acting openers of SUR1 K(ATP) channels. Am J Physiol Endocrinol Metab. 2012 Mar 1;302(5):E540-51.

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