Product Data Sheet

Product Name:	Chlorcyclizine
Cat. No.:	GC63666

Chemical Properties

Cas. No.	82-93-9		
Formula	$C_{18}H_{21}ClN_2$	M.Wt	300.83
Solubility		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	Chlorcyclizine		

Protocol

Rats[1]Timed-mated CRL:CD [SD] female rats between 9 and 13 weeks of age at initiation of dosing and weighing between 245 and 363 g are used. Rats are administered a single daily oral gavage dose of 30, 60, or 90 mg/kg Chlorcyclizine (n=8/group) during the sensitive period for palate development, GDs 11 to 14. These doses are selected such that 30 mg/kg is a likely no-effect dose and higher doses of 60 and/or 90 mg/kg will induce a moderate or high incidence of fetal cleft palate. Given that CRL:CDs [SD] rats have an extremely low incidence of spontaneous cleft palate in the testing laboratory, as well as to avoid unnecessary use of animals, a methylcellulose control group is omitted[1].

[1]. Enright BP, et al. Effects of the histamine H1 antagonist Chlorcyclizine on rat fetal palate development. Birth Defects Res B Dev Reprod Toxicol. 2010 Dec;89(6):474-84.

Background

Chlorcyclizine is a phenylpiperazine that acts as a histamine H_1 receptor antagonist (K_i = 9 nM).[1] It has also been shown to be effective against hepatitis C virus (HCV; EC_{50} = 44 nM *in vitro*), preventing viral entry into host cells.[2] In chimeric mice engrafted with

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primary human hepatocytes, 10-50 mg/kg chlorcyclizine significantly inhibited infection of HCV genotypes 1b and 2a.[2]

1.Tran, V.T., Chang, R.S.L., and Snyder, S.H.Histamine H1 receptors identified in mammalian brain membranes with [3H]mepyramineProc. Natl. Acad. Sci. USA75(12)6290-6294(1978) 2.He, S., Xiao, J., Dulcey, A.E., et al.Discovery, optimization, and characterization of novel chlorcyclizine derivatives for the treatment of hepatitis C virus infectionJ. Med. Chem.59(3)841-853(2016)