Product Data Sheet

Product Name: Doxapram
Cat. No.: GC16537

Chemical Properties

Cas. No.	309-29-5		
Chemical Name	1-ethyl-4-(2-morpholin-4-ylethyl)-3,3-diphenylpyrrolidin-2-one		
SMILES	CCN1CC(C(C1=O)(C2=CC=CC=C2)C3=CC=CC=C3)CCN4CCOCC4		
Formula	$C_{24}H_{30}N_2O_2$	M.Wt	378.51
Solubility	Soluble 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	Doxapram		

Background

Doxapram is a strong, dose-dependent respiratory stimulant in mammals. The oral LD50 in rats is 211mg/kg [1].

After Doxapram treatment, it has been noted a pressor response action through stimulation of the central nervous system (CNS). In addition, Doxapram has shown not only the central sensitization but also the prtipheral sensitization to hypercarbia in both animal and human studies. Furthermore, Doxapram has been reported to stimulate the carotid body in a dose-dependent fashion and have an additive but not synergistic effect on the carotid body response to hupercapnia. Apart from these, Doxapram has also shown the potent, direct and inhibitory effects on cloned TASK-1 and TASK-3 channels with the EC50 values of 410nM, 37nM and 9nM for TASK-1, TASK-3 and TASK-1/TASK-3, respectively. Doxapram has been revealed to augment neuromuscular transmission in a dose-related manner above a threshold concentration of 50μM [1].

References:

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

[1] Yost CS. A new look at the respiratory stimulant doxapram. CNS Drug Rev. 2006 Fall-Winter;12(3-4):236-49.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA