Product Data Sheet

Product Name: D-NAME (hydrochloride)
Cat. No.: GC19437

Chemical Properties

Cas. No.	50912-92-0		
SMILES	[H]N(/C(N([H])CCC[C@@H](N)C(OC)=O)=N/[H])[N+]([O-])=O.Cl		
Formula	$C_7H_{15}N_5O_4$ • HCl	M.Wt	269.7
Solubility	DMF: 20 mg/ml,DMSO: 20 mg/ml,PBS (pH 7.2): 10 mg/ml	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	D-NAME (hydrochloride)		

Background

N(G)-Nitro-D-arginine methyl ester (D-NAME) is the less active enantiomer of the nitric oxide (NO) synthase inhibitor N(G)-nitro-L-arginine methyl ester . D-NAME was initially thought to be inactive and was often used as a negative control for L-NAME. Later studies showed that D-NAME (40 mg/kg/day in rats) can have similar but less pronounced effects as L-NAME (40 mg/kg/day in rats) in the cardiovascular system, particularly at long-term timepoints. D-NAME (3-10 μg/mouse) had no effect on nociception in mice assessed using the tail flick test.

References:
[1].Palmer, R.M.J., Rees, D.D., Ashton, D.S., et al. L-arginine is the physiological precursor for the formation of nitric oxide in endothelium-dependent relaxation Biochem. Biophys. Res. Commun. 153(3), 1251-1256 (1988).
[2]. Chinellato, A., Froldi, G., Caparrota, L., et al. Pharmacological characterization of endothelial cell nitric oxide synthase inhibitors in isolated rabbit aorta Life Sci. 62(6), 479-490 (1998).
[3].Babál, P., Pechánová, O., and Bernátová, I. Long-term administration of D-NAME

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induces hemodynamic and structural changes in the cardiovascular system Physiol. Res. 49(1), 47-54 (2000).
[4].Kawabata, A., Umeda, N., and Takagaki, H. L-arginine exerts a dual role in nociceptive processing in the brain: Involvement of the kyotorphin-Met-enkephalin pathway and NO-cyclic GMP pathway Br. J. Pharmacol. 109(1), 73-79 (1993).

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