Product Data Sheet

Product Name: Nitracrine
Cat. No.: GC33400

Chemical Properties

Cas. No.	4533-39-5		
SMILES	O=[N+](C1=CC=CC2=NC3=CC=CC=C3C(NCCCN(C)C)=C21)[O-]		
Formula	$C_{18}H_{20}N_4O_2$	M.Wt	324.38
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	Nitracrine		

Protocol

Cell experiment: Six-week-old male rats are injected with 3-methylcholanthrene (4 mg/animal) for 3 days before decapitation. Livers are removed, homogenized in a homogenizer, and centrifuged for 30 min at 10000g.The activation of ledakrin with the microsomal fraction of rat liver is carried out in 0.16 M Trizma base buffer (pH 7.4). The incubation mixture consists of 125 mM nicotinamide, 100 mM glucose 6-phosphate, 10 mM NADPH, glucose-6-phosphate dehydrogenase (40 units), rat liver microsomes (5 mg/mL), andledakrin (1 mmol)[1].

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

References:

[1]. Gorlewska K, et al. Products of metabolic activation of the antitumor drug ledakrin (nitracrine) in vitro.

Background

Nitracrine is an antitumor drug that has been used clinically for several years.

It is demonstrated during the reduction of ledakrin that a key metabolite, a compound with anadditional five-membered ring attaching to positions 1 and 9 of the acridine core and with the retained 9-aminoalkyl side chain, is formed in all the systems that are studied. It is determined that the reactive nitrogen atoms of this additional ring undergo further transformations resulting in the formation of a six-membered ring produced by the addition of a carbon atom to the dihydropyrazoloacridine ring. Furthermore, it is observed that positions 2 and 4 of ledakrin's acridine ring are susceptible to nucleophilic substitution as revealing by the studies with dithiothreitol. Additionally, although most products from the reduction of ledakrin are extremely unstable, 1-aminoacridinone, producing enzymatically and with dithiothreitol, exhibiting persistent stability under the studied conditions[1].

[1]. Gorlewska K, et al. Products of metabolic activation of the antitumor drug ledakrin (nitracrine) in vitro.

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