Product Data Sheet

Product Name: Bunaftide (Bunaftine)
Cat. No.: GC32661

Chemical Properties

Cas. No.	32421-46-8		
SMILES	O=C(C1=C2C=CC=CC2=CC=C1)N(CCCC)CCN(CC)CC		
Formula	$C_{21}H_{30}N_2O$	M.Wt	326.48
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	Bunaftide (Bunaftine)		

Protocol

Cell experiment:

Human embryonic fibroblasts and HeLa cells are seeded into 35-mm plastic Petri dishes at a density of 1x105 cells/cm2. Bunaftide is used in final concentrations of 0.1-2.0 mM. The cells are exposed to the drug for periods ranging from 15 min to 24 h. To allow the cells to recover, the Bunaftide medium is removed and the cultures are left in standard medium for 4-24 h[1].

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References:

[1]. Moskalewski S, et al. Effects of bunaftine on morphology, microfilament integrity, and mitotic activity in cultured human fibroblasts and HeLa cells. Cell Tissue Res. 1984;236(1):107-15.
[2]. Kimura T, et al. Electrophysiological effects of bunaftine, an antiarrhythmic drug, on action potential characteristics in ventricular muscle preparations. Nihon Yakurigaku Zasshi. 1986 Jul;88(1):1-7.

Background

Bunaftide (Bunaftine; Bunaphtide; Meregon) is an antiarrhythmic agent.

At concentrations of 0.5-2.0 mM, Bunaftide causes contraction and rounding of the cells with loss of microvilli-like processes. Aggregates of dense, partly granular, partly fibrillar material form in the cytoplasm and the rough endoplasmic reticulum became vesiculated. Bundles of actin filaments are disrupted, forming rings, coils, and granules. 0.4 mM Bunaftide increases and 0.8-1.0 mM markedly decreases the percentage of mitotic cells, without accumulation of cells in any particular stage of mitosis. The drug may arrest the cell cycle at some point before mitosis; it may have a critical concentration above which the arrest becomes permanent[1]. Bunaftide at 1, 5 and 10 mg/L produces a concentration-dependent depression of the maximum rate of rise of the action potential in guinea pig papillary muscle preparations without affecting the resting membrane potential and the action potential amplitude. The action potential duration (APD50, APD90) is significantly prolonged by the treatment with 1 and 5 mg/L Bunaftide, while it is not changed by the treatment with 10 mg/L[2].

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