Product Data Sheet

Product Name: Amprolium
Cat. No.: GC35328

Chemical Properties

Cas. No.	121-25-5		
SMILES	CC1=CC=CC=[N+]1CC2=CN=C(CCC)N=C2N.[Cl-]		
Formula	$C_{14}H_{19}ClN_4$	M.Wt	278.78
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	Amprolium		

Background

Amprolium is a thiamine analog and antiprotozoal agent that interferes with thiamine metabolism and inhibits carbohydrate synthesis.[1,2,3,4] It competitively inhibits thiamine uptake by *E. tenella* schizonts and by chick host intestinal cells (K_is = 7.6 and 326 µM, respectively).[1] It also inhibits hexose formation and pentose utilization *ex vivo* in isolated lysed rat erythrocytes and in liver, kidney, heart, and intestinal tissue homogenates following dietary administration.[2] Amprolium (1,000 ppm in feed) inhibits oocyst output and sporulation of *Eimeria maxima, E. brunetti*, and *E. acervulina* in infected chicks.[3] It also decreases lesion and oocyst scores and mortality of *E. tenella*-infected chicks following dietary administration of a 125 ppm dose.[4] Amprolium (100 µM) induces apoptosis in PC12 rat adrenal cells and increases the level of cleaved caspase-3.[5] Formulations containing amprolium have been used as coccidiostats in poultry processing.

1.James, S.Thiamine uptake in isolated schizonts of Eimeria tenella and the inhibitory effects of amproliumParasitology80(2)313-322(1980) 2.Brin, M.The antithiamine effects

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of amprolium in rats on tissue transketolase activityToxicol. Appl. Pharmacol.6(4)454-458(1964) 3.Joyner, L.P., and Norton, C.C.The anticoccidial effects of amprolium, dinitolmide and monensin against Eimeria maxima, E. brunetti and E. acervulina with particular reference to oocyst sporulationParasitology75(2)155-164(1977) 4.Abbas, R.I., Manzoor, Z., Munawar, S.H., et al.Anticoccidial activity of hydrochloric acid (HCl) against Eimeria tenella in broiler chickensPesq. Vet. Bras.31(5)425-429(2011) 5.Chornyy, S., Parkhomenko, J., and Chorna, N.Thiamine deficiency caused by thiamine antagonists triggers upregulation of apoptosis inducing factor gene expression and leads to caspase 3-mediated apoptosis in neuronally differentiated rat PC-12 cellsActa. Biochim. Pol.54(2)315-322(2007)

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