

Product Data Sheet

Product Name: Benomyl

Cat. No.: GC49781

Chemical Properties

Cas. No. 17804-35-2

SMILES O=C(NCCCC)N1C(NC(OC)=O)=NC2=CC=CC=C12

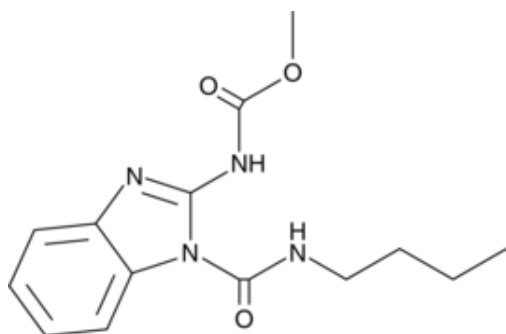
Formula $C_{14}H_{18}N_4O_3$ M.Wt 290.3

Solubility DMF: 30 mg/ml, DMF:PBS (pH 7.2) Storage -20°C
(1:3): 0.25 mg/ml, DMSO: 5
mg/ml, Ethanol: Slightly soluble

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C 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



Background

Benomyl is a carbamate pesticide.¹ It inhibits mycelial growth of the plant pathogenic fungus *A. rabiei* on potato dextrose agar ($EC_{50} = 2.19 \mu\text{g/ml}$). Benomyl (1 mg/ml in the drinking water) decreases the fecundity of red ant (*M. rubra*) queens.² It induces the production of reactive oxygen species (ROS), apoptosis, and DNA damage in H9c2 rat cardiomyocytes.³ Formulations containing benomyl have been used to control fungal disease in agriculture.

1. Demirci, F., Bayraktar, H., Babalioğlu, I., et al. In vitro and in vivo effects of some fungicides against the chickpea blight pathogen, *Ascochyta rabiei*. *Phytopathology* 151(9):519-524 (2003)

Caution: Product has not been fully validated for medical applications. For research use only.

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2.Pech, P., and Heneberg, P.Benomyl treatment decreases fecundity of ant queensJ. Invertebr. Pathol.13061-63(2015) 3.Mehtap, K., Ezgi, Ö., Tugce, B., et al.Benomyl induced oxidative stress related DNA damage and apoptosis in H9c2 cardiomyoblast cellsToxicol. In Vitro75105180(2021)

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