

Product Name: Doramectin

Product Number: D058

CAS Number: 117704-25-3

Molecular Formula: $C_{50}H_{74}O_{14}$

Molecular Weight: 899.11

Appearance: White solid

Storage Conditions: -20°C

Description: Doramectin is a biosynthetic avermectin derived from a mutant strain of *Streptomyces avermitilis*, supplemented with a cyclohexylcaboxylic acid starting unit. Doramectin was developed as an anthelmintic for internal parasite control. The presence of the cyclohexyl group replacing the sec-butyl moiety affords greater hydrophobicity and longer biological half-life compared to avermectin. Like the other milbemycin/avermectins, it selectively binds to parasite glutamate-gated chloride ion channels and disrupts neurotransmission leading to paralysis and death of the parasite.

Doramectin is soluble in ethanol, methanol, DMF and DMSO.

References: Avermectin aglycones. Mrozik H. et al. J. Org. Chem. 1982, 47, 489.

Ivermectin, a new broad-spectrum antiparasitic agent. Chabala J.C. et al. J. Med. Chem. 1980, 23, 1134.