Web: www.taiclone.com
Tel: +886-2-2735-9682
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Ivermectin

Catalog No: tcsc0720

Available Sizes

Size: 500mg

Size: 1g

Specifications

CAS No:
70288-86-7

Formula:
$C_{48}H_{74}O_{14}$

Pathway:
Autophagy;Anti-infection;Autophagy

Target:
Autophagy;Parasite;Mitophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 50 mg/mL (57.14 mM); H2O :

Alternative Names:
MK-933

Observed Molecular Weight:
875.09

Product Description

Ivermectin (MK-933) is a widely used antiparasitic agent in human and veterinary medicine. It is a positive allosteric effector of **$P2X_4$** and the α7 neuronal nicotinic acetylcholine receptor (**nAChRs**).

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In Vitro: Ivermectin (MK-933; IVM) is a specific positive allosteric effector of heterologously expressed $P2X_4$ and possibly of heteromeric $P2X_4$/ $P2X_6$ channels. In the submicromolar range (EC_{50}=250 nM) the action of IVM is rapid and reversible, resulting in increased amplitude and slowed deactivation of $P2X_4$ channel currents evoked by ATP. Ivermectin (MK-933; IVM) also markedly increases the potency of ATP and that of the normally low-potency agonist a,b-methylene-ATP in a use- and voltage-independent manner without changing the ion selectivity of $P2X_4$ channels[1]. Ivermectin (MK-933; IVM) activates glutamate-gated chloride channels in the nerves and muscles of the parasite, leading to membrane hyperpolarization and muscle paralysis. The major mode of action of Ivermectin (MK-933; IVM) is most likely the disruption of ingestive activity of the parasite, resulting in starvation[2]. Preapplication of ivermectin, in the micromolar range, strongly enhances the subsequent acetylcholine-evoked current of the neuronal chick or human α7 nicotinic acetylcholine receptors reconstituted in Xenopus laevis oocytes and K-28 cells[3]. Ivermectin activates the rat recombinant $\alpha_1\beta_2\gamma_{2s}$ $GABA_A$ receptor. Activation of the channel with 10 mM GABA results in currents rising within 1 ms to their maximal amplitudes. The EC_{50} value for GABA is 7.5 μM[4].