Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

MEN11467

Catalog No: tcsc7328

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Size: 20mg

Specifications

CAS No:
214487-46-4

Formula:
$C_{38}H_{40}N_4O_3$

Pathway:
Neuronal Signaling;GPCR/G Protein

Target:
Neurokinin Receptor;Neurokinin Receptor

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Observed Molecular Weight:
600.75

Product Description

MEN11467 is a selective and orally- effective peptidomimetic **tachykinin NK_1 receptor** antagonist.

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IC50 & Target: Tachykinin NK_1 receptor[1]

In Vitro: MEN11467 potently inhibits the binding of [^{3}H] substance P (SP) to tachykinin NK_1 receptors in the IM9 limphoblastoid cell line (pK_i=9.4±0.1). MEN11467 is highly specific for the human tachykinin NK_1 receptors, since it has negligible effects (pK_i2 or NK_3 receptors and to a panel of 30 receptors ion channels unrelated to tachykinin receptors. The antagonism exerted by MEN11467 at tachykinin NK_1 receptors is insurmountable in saturation binding experiments, both K_D and B_{max} of SP are significantly reduced by MEN11467 (0.3-10 nM). In the guinea-pig isolated ileum, MEN11467 (0.03-1 nM) produces a nonparallel rightward shift of the concentration-response curve to SP methylester with a concomitant reduction of the E_{max} to the agonist (pK_B=10.7±0.1). Moreover the antagonist activity of MEN11467 is hardly reversible despite prolonged washout[1]. The pseudopeptide tachykinin NK_1 receptor antagonist, MEN11467 is used to study tachykininergic involvement in antigen-induced mucus secretion in ferret trachea in vitro. MEN11467 (1 nM-10 μM) inhibits [Sar^9]SP-induced $^{35}SO_4$, output in a concentration-dependent manner with an approximate IC_{50} of 0.3 μM[2].

In Vivo: MEN11467 produces a long lasting (>2-3 h) dose-dependent antagonism of bronchoconstriction induced by the selective tachykinin NK_1 receptor agonist, [Sar^9, Met(O_2)^{11}]SP in anaesthetized guinea-pigs (ID_{50}s=29±5, 31±12 and 670±270 μg/kg, after intravenous, intranasal and intraduodenal administration, respectively), without affecting bronchoconstriction induced by methacholine. After oral administration MEN11467 produces a dose-dependent inhibition of plasma protein extravasation induced in guinea-pig bronchi by [Sar^9, Met(O_2)^{11}] (ID_{50}= 6.7±2 mg/kg) or by antigen challenge in sensitized animals (ID_{50}=1.3 mg/kg). After i.v. administration MEN11467 weakly inhibits the GR 73632-induced foot tapping behaviour in gerbil (ED_{50}=2.96±2 mg/kg), indicating a poor ability to block central tachykinin NK_1 receptors[1]. Treatment with MEN11467 (1 mmol/kg twice weekly for 2 weeks) results in a temporary growth arrest of the U373 MG xenograft that last for about 10 days until the last MEN11467 administration (TVI%=56). Thereafter, the tumor start to regrow. MEN11467 anti-tumor activity is partially reverted by the simultaneous administration of an equimolar dose of exogenous substance P (SP), suggesting the specificity of tachykinin NK1 receptor activation in glioma growth. Prolonged s.c. treatment with a higher MEN11467 dose (1.7 mmol/kg at five times a week for 6 weeks) completely inhibits the growth of U373 MG tumor for the entire length of the experiment, even following administration of a low exogenous SP dose. After 6 weeks, the tumor mass is not increased compared to the untreated control with TVI%=96%[3].