

Product Data Sheet

Product Name: KMCA-0011

Cat. No.: GC79269

Chemical Properties

Cas. No.

Formula $C_{22}H_{24}ClN_3O_2$ M.Wt 397.9

Solubility DMSO: 50 mg/mL (125.66 mM); ultrasonic and warming and heat to 60°C) Storage Store at -20°C

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

KMCA-0011 is an orally active α 2C adrenoceptor antagonist ($K_i = 56.7$ nM). KMCA-0011 alleviates depressive behaviors by enhancing BDNF and synaptic plasticity. KMCA-0011 displays favorable metabolic stability, including high plasma stability (99.8% after 120 min). KMCA-0011 can be used for the research of depression [1].

In Vivo, KMCA-0011 (Compound 11e) (1-10 mg/kg, p.o., daily for one week) shows the most

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consistent behavioral efficacy across multiple tests, uniquely ameliorates anxiety-like behavior in the EPM test, increases hippocampal BDNF expression and restores CORT-induced impairments in synaptic plasticity in the Maternal separation (MS) mouse model^[1].

In Vitro, KMCA-0011 (Compound 11e) exhibits notably high binding affinity toward $\alpha 2C$ Adrenoceptor ($K_i = 56.7$ nM) in human HEK-293 cells^[1]. KMCA-0011 (10 μ M) effectively inhibits Epinephrine-induced ERK phosphorylation^[1].

References:

[1]. Seo K, et al. $\alpha 2C$ Adrenoceptor antagonist KMCA-0011 alleviated depressive-like behaviors in a maternal separation mouse model. Bioorg Med Chem Lett. 2026 Feb 1;131:130467.

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