Sigma-1 receptor antagonist 4

Cat. No.: HY-149274

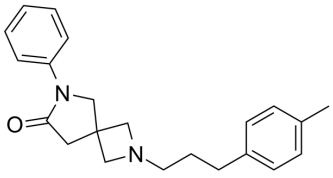
Molecular Formula: $C_{22}H_{26}N_2O$

Molecular Weight: 334.45

Target: Sigma Receptor

Pathway: Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Sigma-1 receptor antagonist 4 (Compound 32) is a potent σ1R antagonist that significantly enhances the analgesic effect of morphine and rescues morphine-induced analgesic tolerance, with potential to prevent morphine tolerance[1].
IC_{50} & Target	IC50: 19.1 ± 0.6 nM (σ1R)[1]
In Vivo	Sigma-1 receptor antagonist 4 (0–60 mg/kg; i.p.; single dose) dose-dependently enhances morphine-induced analgesia within a dose of 40 mg/kg[1]. Sigma-1 receptor antagonist 4 (30 mg/kg; i.p.; single dose) potentiates antinociception via enhancing the morphineinduced MOR agonism[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mouse model[1]
Dosage:	10, 20, 30, 40, 50, 60 mg/kg
Administration:	i.p.; dissolved in saline with 30% PEG300 and 5% DMSO; measured the percentage of maximal possible effect (% MPE)after 30 min
Result:	Dose-dependently enhanced morphine-induced analgesia within a dose of 40 mg/kg. Potentiated antinociception via enhancing the morphine-induced MOR agonism.

REFERENCES

[1]. Fu K, et al. 2,6-diazaspiro[3.4]octan-7-one derivatives as potent sigma-1 receptor antagonists that enhanced the antinociceptive effect of morphine and rescued morphine tolerance. Eur J Med Chem. 2023 Mar 5;249:115178.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA