S 38093 hydrochloride

Cat. No.: HY-104003A

CAS No.: 1222097-72-4

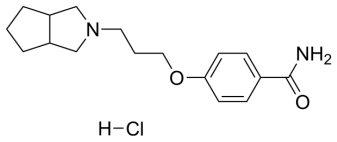
Molecular Formula: $C_{17}H_{25}ClN_2O_2$

Molecular Weight: 324.85

Target: Histamine Receptor

Pathway: GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling

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



BIOLOGICAL ACTIVITY

Description	S 38093 hydrochloride is a brain-penetrant, orally active antagonist of H3 receptor, with K_is of 8.8, 1.44 and 1.2 μM for rat, mouse and human H3 receptors, respectively.
In Vitro	In cellular models, S 38093 is able to antagonize mice H3 receptors (K_B=0.65 μM) and to suppress cAMP decrease induced by an H3 agonist via human H3 receptors (K_B=0.11 μM). In cells expressing a high H3 density, S 38093 behaves as a moderate inverse agonist at rat and human H3 receptors (EC_{50}=9 and 1.7 μM, respectively)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	S 38093 (0.3 and 3 mg/kg/d p.o., 28 days) significantly increases proliferation of progenitors in the DG of hippocampus in young adult mice. S 38093 (0.3 mg/kg/d) treatment significantly increases the number of DCX^+ cells with tertiary dendrites. S 38093 (0.3, 1 and/or 3 mg/kg) significantly increases cell proliferation, survival, and maturation in the DG of hippocampus in aged mice relative to vehicle. S 38093 (3 mg/kg/d p.o., 28 days) increases cell proliferation and has a strong effect on cell survival, also increases the dendritic intersections in both genotypes (one-way ANOVA with repeated measure, $p < 0.01$), with a significant effect from 50 to 80 in $APPSWE^{TG}$ mice only. In aged mice, chronic administration of S 38093 (1 and/or 3 mg/kg/day p.o., 28 days) reverses this age-dependent decrease in BDNF-IX, BDNF-IV and BDNF-I transcripts. In addition, S 38093 at three tested doses (0.3, 1 and 3 mg/kg/d) increases VEGF transcripts compared to vehicle-aged group[1]. In mice, S 38093 significantly increases ex vivo N-tele-Methylhistamine cerebral levels from 3 mg/kg p.o. and antagonized R-α-Methylhistamine-induced dipsogenia from 10 mg/kg i.p[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Guilloux JP, et al. S 38093, a histamine H3 antagonist/inverse agonist, promotes hippocampal neurogenesis and improves context discrimination task in aged mice. Sci Rep. 2017 Feb 20;7:42946.

[2]. Sors A, et al. Mechanistic characterization of S 38093, a novel inverse agonist at histamine H3 receptors. Eur J Pharmacol. 2017 May 15;803:11-23

Caution: Product has not been fully validated for medical applications. For research use only.

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