

Product Datasheet

SBI 810 HCl

Catalog No. **BP-01161A** · CAS **2772746-58-2** · Form **salt · hydrochloride** · Physical state **solid** · Color **light yellow to yellow** · Version **1.0** · Revision **2026-09-04**

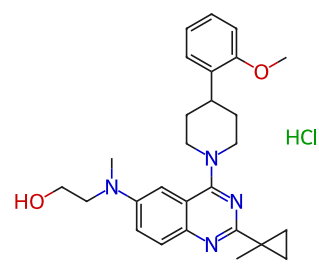
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Target	Research area
Neurotensin Receptor; Arrestin; iGluR; ERK; Sodium Channel	Neurological Disease

Molecular formula **C₂₇H₃₅ClN₄O₂**

Molecular weight **483.0450**

STRUCTURE



DESCRIPTION

SBI-810 hydrochloride is a functionally selected β -arrestin-biased neurotensin receptor 1 (NTSR1) allosteric modulator. SBI-810 hydrochloride modulates NTSR1 G protein signaling in a G protein-specific manner in the presence of the endogenous ligand, neurotensin (NT). SBI-810 hydrochloride fully antagonizes NT-induced activation of Gq, partially antagonizes NT-induced activation of Gi1 and is permissive of NTSR1 activation of GoA and G12.

BIOLOGICAL ACTIVITY

In Vitro

SBI-810 (10 min) hydrochloride stimulates the recruitment of β -arrestin 2 to human NTSR1 in HEK293T cells, and antagonizes Gq activation induced by Neurotensin (NT) (HY-P0234).

Bath-applied SBI-810 (5 μ M, administered during recording) hydrochloride decreases the action potential firing frequency of DRG neurons, increases their rheobase, and inhibits neuronal excitability.

In Vivo

SBI-810 (12 mg/kg/10 μ g~22 nmol); 1 μ g; i.p./i.t.; single dose) hydrochloride exerts potent, NTSR1- and β arr2-dependent spinal analgesic effects in naive C57BL/6J mice, and alleviates physiological acute mechanical and thermal pain.

SBI-810 (20 μ g; i.t.; single dose) hydrochloride exerts potent analgesic effects on physiological acute mechanical pain in naive Sprague Dawley rats.

SBI-810 (12 mg/kg; i.p.; single dose) hydrochloride potently inhibits pain in mouse plantar incision and tibial fracture post-surgical pain models.

SBI-810 (12 mg/kg/10 μ g; i.p./i.t.; single dose, administered 7 days post-surgery) hydrochloride exerts potent, NTSR1- and β arr2-dependent analgesic effects in SNI model mice, alleviating neuropathic mechanical allodynia and cold allodynia.

SBI-810 (12 mg/kg; i.p.; single dose; administered concurrently with formalin injection) hydrochloride potently inhibits inflammatory hyperalgesia and mechanical allodynia, and reduces formalin-induced activation of nociceptors in DRG neurons in mouse formalin/CFA (HY-153808) inflammatory pain models.

SBI-810 (12 mg/kg; i.p.; single dose; administered post-STZ-induced hyperglycemia) hydrochloride potently alleviates mechanical pain and cold pain in mice with STZ (HY-13753)-induced diabetic neuropathic pain.

SBI-810 (12-30 mg/kg; i.p.; single dose) hydrochloride attenuates or abolishes morphine-induced CPP, and significantly reduces the cumulative withdrawal score induced by Naloxone (HY-17417A) in mice treated with escalating doses of morphine.

SOLUBILITY

soluble in DMSO

REFERENCES

[1]. Guo R, et al. Arrestin-biased allosteric modulator of neurotensin receptor 1 alleviates acute and chronic pain. *Cell*. 2025;188(16):4332-4349.e21.

[2]. Pottie E, et al. Pain management beyond opioids: a β -arrestin2-biased allosteric GPCR modulator opens new avenues for drug development. *Signal Transduct Target Ther*. 2025 Aug 27;10(1):264.

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Lot CoA and SDS are separate documents.