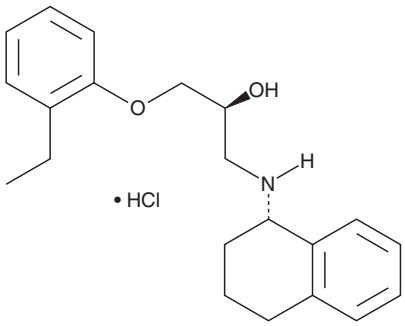
PRODUCT INFORMATION

SR 59230A (hydrochloride)

Item No. 21407



CAS Registry No.: 1135278-41-9
Formal Name: (2S)-1-(2-ethylphenoxy)-3-[[(1S)-1,2,3,4-tetrahydro-1-naphthalenyl]amino]-2-propanol, monohydrochloride
MF: $C_{21}H_{27}NO_2$ • HCl
FW: 361.9
Purity: ≥99%
Supplied as: A solid
Storage: Room temperature
Stability: ≥1 year

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SR 59230A (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the SR 59230A (hydrochloride) in the solvent of choice. SR 59230A (hydrochloride) is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of up to approximately 100 mM. It is also soluble in water. The solubility of SR 59230A (hydrochloride) in water is up to approximately 10 mM. We do not recommend storing the aqueous solution for more than one day.

Description

SR 59230A (hydrochloride) is a β_3-adrenergic receptor (β_3-AR) antagonist (pA_2s = 8.76, 7.31, and 6.63 in rat proximal colon, guinea pig atrium, and guinea pig trachea, respectively).[1] It is less selective for β_3-AR in cells transfected with the human β-AR subtypes (K_is = 16.4, 61.9, and 122 nM for β_1-, β_2-, and β_3-AR, respectively).[2] At low concentrations, SR 59230A blocks MDMA-induced hyperthermia, while at high concentrations it blocks hyperthermia but also increases heat loss through an α_1-AR antagonistic mechanism.[3] In adipocytes, it induces phosphorylation of p38 MAPK *via* the G_s pathway.[4] It has also been used in studies of heart failure to elucidate the role of the β_3-ARs.[5]

References

1. Manara, L., Badone, D., Baroni, M., *et al.* Functional identification of rat atypical β-adrenoceptors by the first β_3-selective antagonists, aryloxypropanolaminotetralins. *Br. J. Pharmacol.* **117(3)**, 435-442 (1996).
2. Hoffman, C., Leitz, M.R., Oberdorf-Maass, S., *et al.* Comparative pharmacology of human β-adrenergic receptor subtypes--characterization of stably transfected receptors in CHO cells. *Naunyn-Schmiedeberg's Arch. Pharmacol.* **369(2)**, 151-159 (2004).
3. Bexis, S. and Docherty, J.R. Role of α_1- and β_3-adrenoceptors in the modulation by SR59230A of the effects of MDMA on body temperature in the mouse. *Br. J. Pharmacol.* **158(1)**, 259-266 (2009).
4. Mizuno, K., Kanda, Y., Kuroki, Y., *et al.* Stimulation of β_3-adrenoceptors causes phosphorylation of p38 mitogen-activated protein kinase *via* a stimulatory G protein-dependent pathway in 3T3-L1 adipocytes. *Br. J. Pharmacol.* **135(4)**, 951-960 (2002).
5. Gan, R.T., Li, W.M., Xiu, C.H., et al. Chronic blocking of β_3-adrenoceptor ameliorates cardiac function in rat model of heart failure. *Chin. Med. J. (Engl.)* **120(24)**, 2250-2255 (2007).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM