SB-271046 (hydrochloride)
Item No. 18513

CAS Registry No.: 209481-24-3
Formal Name: 5-chloro-N-[4-methoxy-3-(1-piperazinyl)phenyl]-3-methyl-benzo[b]thiophene-2-sulfonamide, monohydrochloride
MF: C_{20}H_{22}ClN_{3}O_{3}S_{2} \cdot \text{HCl}
FW: 488.4
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max} 211, 241, 282 nm

Laboratory Procedures

For long term storage, we suggest that SB-271046 (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

SB-271046 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the SB-271046 (hydrochloride) in the solvent of choice. SB-271046 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of SB-271046 (hydrochloride) in these solvents is approximately 10 and 3 mg/ml, respectively.

SB-271046 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SB-271046 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SB-271046 (hydrochloride) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SB-271046 is an orally-available antagonist of the serotonin (5-hydroxytryptamine, or 5-HT; Item No. 14332) receptor 5-HT_{6} (pKi = 9.02-8.92).\textsuperscript{1,2} It is at least 100-fold selective for 5-HT_{6} over other 5-HT receptors, as well as 55 other receptors, enzymes, and ion channels.\textsuperscript{2} While it does not alter basal levels of 5-HT, dopamine, or noradrenaline, SB-271046 produces a significant increase in extracellular levels of glutamate and aspartate within the frontal cortex.\textsuperscript{3} It has been used to evaluate the role of 5-HT_{6} in learning and memory.\textsuperscript{4}

References