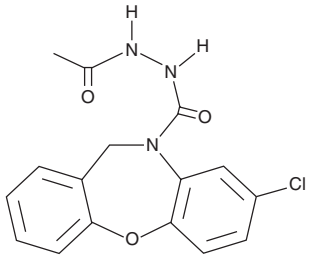
PRODUCT INFORMATION

SC-19220

Item No. 14060

CAS Registry No.:	19395-87-0
Formal Name:	8-chloro-dibenz[b,f][1,4]oxazepine-10(11H)-carboxy-(2-acetyl)hydrazide
MF:	$C_{16}H_{14}ClN_3O_3$
FW:	331.8
Purity:	≥96%
UV/Vis.:	λ_{max}: 203 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

SC-19220 is supplied as a crystalline solid. A stock solution may be made by dissolving the SC-19220 in an organic solvent, which should be purged with an inert gas. SC-19220 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of SC-19220 in these solvents is approximately 14 mg/ml.

SC-19220 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SC-19220 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SC-19220 has a solubility of approximately 300 µg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The prostaglandin E_2 (PGE_2) receptor EP_1 is involved in triggering PGE_2-mediated pain, neuronal survival and growth as well as the suppression of tumor metastasis. SC-19220 is a dibenzoxazepine that acts as a selective antagonist of PGE_2 at the EP_1 receptor.[1,2] At doses between 0.3-300 µM, SC-19220 acts as a competitive antagonist of PGE_2-induced smooth muscle contractions of guinea pig ileum and stomach.[3,4] SC-19220 also acts as a PGE_2 antagonist in the EP_1 receptor-mediated contraction of guinea pig trachea.[5] SC-19220 displaces radiolabeled PGE_2 from the cloned human EP_1 receptor with an IC_{50} of 6.7 µM and exhibits no binding at the human EP_2 receptor.[6,7] It binds with apparent low affinity to the cloned mouse EP_1 receptor expressed in CHO cells.[8] In a model of bone resorption, 3-150 µM SC-19220 inhibited both 1,25 dihydroxy vitamin D_3- and PGE_2-stimulated osteoclastogenesis in mouse osteoclast precursors.[9] Antagonism of EP_1 with 1 µM SC-19220 has been shown to promote metastasis in a mouse model of metastatic breast cancer.[10] In a rodent model of Parkinson's disease, 1.5 µM SC-19220 prevented PGE_2-mediated loss of dopaminergic neurons from rat substantia nigra.[11]

References

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