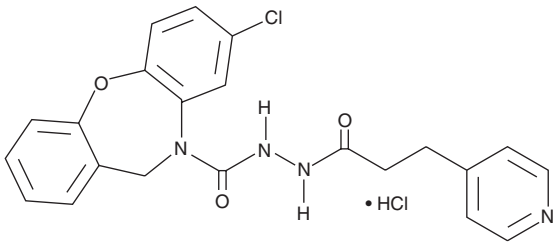
# PRODUCT INFORMATION

## SC-51089

*Item No. 10011561*

**CAS Registry No.:** 146033-02-5
**Formal Name:** 8-chloro-2-[1-oxo-3-(4-pyridinyl)propyl] hydrazide-dibenz[b,f][1,4]oxazepine-10(11H)-carboxylic acid, monohydrochloride
**Synonym:** CID-132748
**MF:** $C_{22}H_{19}ClN_4O_3 \bullet HCl$
**FW:** 459.3
**Purity:** ≥95%
**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-51089 is supplied as a crystalline solid. A stock solution may be made by dissolving the SC-51089 in the solvent of choice, which should be purged with an inert gas. SC-51089 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SC-51089 in DMSO is approximately 20 mg/ml and approximately 30 mg/ml in ethanol and DMF.

SC-51089 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SC-51089 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. SC-51089 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

SC-51089 is an antagonist of the prostaglandin $E_2$ ($PGE_2$) receptor subtype $EP_1$ ($K_i$ = 1.332 µM).[1] It is selective for $EP_1$ over $EP_2$, $EP_3$, and $EP_4$ ($K_i$s = >100, 17.5, and >100 µM, respectively), as well as the $PGD_2$ receptor DP, $PGF_{2\alpha}$ receptor FP, $PGI_2$ receptor IP, and thromboxane $A_2$ receptor TP ($K_i$s = >100, 61.13, >100, and 11.18 µM, respectively). SC-51089 (10-50 µM) decreases cell death induced by amyloid-β 1-42 (Aβ42) in MC65 human neuroblastoma cells.[2] It inhibits the growth of KMG-4 glioma cells *in vitro* ($IC_{50}$ = ~1 µM) and reduces tumor growth in a KMG4 mouse xenograft model when administered at a dose of 25 mg/kg.[3] SC-51089 also reduces phenylbenzoquinone-induced writhing in mice ($ED_{50}$ = 6.8 mg/kg).[4]

### References


1. Abramovitz, M., Adam, M., Boie, Y., *et al.* The utilization of recombinant prostanoid receptors to determine the affinities and selectivities of prostaglandins and related analogs. *Biochim. Biophys. Acta* **1483(2)**, 285-293 (2000).
2. Li, X., Rose, S.E., Montine, K.S., *et al.* Antagonism of neuronal prostaglandin $E_2$ receptor subtype 1 mitigates amyloid β neurotoxicity in vitro. *J. Neuroimmune Pharmacol.* **8(1)**, 87-93 (2016).
3. Matsuo, M., Yoshida, N., Zaitsu, M., *et al.* Inhibition of human glioma cell growth by a PHS-2 inhibitor, NS398, and a prostaglandin E receptor subtype EP1-selective antagonist, SC51089. *J. Neurooncol.* **66**, 285-292 (2004).
4. Hallinan, E.A., Hagen, T.J., Husa, R.K., *et al.* N-substituted dibenzoxazepines as analgesic $PGE_2$ antagonists. *J. Med. Chem.* **36**, 3293-3299 (1993).





**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