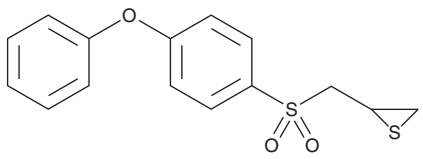
PRODUCT INFORMATION

SB-3CT

Item No. 16337

CAS Registry No.:	292605-14-2
Formal Name:	2-[[(4-phenoxyphenyl)sulfonyl]methyl]-thiirane
Synonyms:	Matrix Metalloproteinase-2/9 Inhibitor IV, MMP-2/MMP-9 Inhibitor IV
MF:	$C_{15}H_{14}O_3S_2$
FW:	306.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 244 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

SB-3CT is supplied as a crystalline solid. A stock solution may be made by dissolving the SB-3CT in the solvent of choice, which should be purged with an inert gas. SB-3CT is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SB-3CT in these solvents is approximately 2, 15, and 25 mg/ml, respectively.

SB-3CT is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SB-3CT should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SB-3CT has a solubility of approximately 0.1 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SB-3CT is a selective, mechanism-based inhibitor of the gelatinases, matrix metalloproteinase-2 (MMP-2) and MMP-9 (K_is = 28 and 400 nM, respectively).[1,2] First pass metabolism of SB-3CT *in vivo* produces a monohydroxylated metabolite that has greater inhibitory activity (K_is = 6 and 160 nM for MMP-2 and MMP-9, respectively).[2] Both SB-3CT and its active metabolite can cross the blood-brain barrier and have utility in diseases of the central nervous system, such as stroke and traumatic brain injury.[2,3] SB-3CT may have applications in other pathologies involving gelatinases, including cancer, cardiovascular diseases, and inflammation.[4,5]

References

1. Kleifeld, O., Kotra, L.P., Gervasi, D.C., *et al. J. Biol. Chem.* **276(20)**, 17125-17131 (2001).
2. Gooyit, M., Suckow, M.A., Schroeder, V.A., *et al. ACS Chem. Neurosci.* **3(10)**, 730-736 (2012).
3. Hadass, O., Tomlinson, B.N., Gooyit, M., *et al. PLoS One* **8(10)**, e76904 (2013).
4. Krüger, A., Arlt, M.J., Gerg, M., *et al. Cancer Res.* **65(9)**, 3523-3526 (2005).
5. Gooyit, M., Lee, M., Schroeder, V.A., *et al. J. Med. Chem.* **54(19)**, 6676-6690 (2011).

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