# **PRODUCT** INFORMATION



## MMP-2 Inhibitor II

Item No. 17267

CAS Registry No.:	869577-51-5
Formal Name:	N-[4-[4-[(2-oxiranylmethyl)sulfonyl]
	phenoxy]phenyl]-methanesulfonamide
Synonyms:	Matrix Metalloproteinase-2 Inhibitor II
MF:	$C_{16}H_{17}NO_6S_2$
FW:	383.4
Purity:	≥98%
UV/Vis.:	$\lambda_{max}$ : 243 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

MMP-2 Inhibitor II is supplied as a crystalline solid. A stock solution may be made by dissolving the MMP-2 inhibitor II in the solvent of choice, which should be purged with an inert gas. MMP-2 Inhibitor II is soluble in the organic solvent DMSO. The solubility of MMP-2 inhibitor II in this solvent is approximately 200 mg/ml.

MMP-2 Inhibitor II is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

#### Description

MMP-2 Inhibitor II is an oxirane p-sulfonamido analog of SB-3CT (Item No. 16337) that irreversibly inhibits matrix metalloproteinase-2 (MMP-2; K = 2.4  $\mu$ M).<sup>1</sup> It less potently inhibits MMP-1 and -7 (K = 45 and 379  $\mu$ M, respectively) and does not inhibit MMP-3, -7, or -9.<sup>1</sup> MMP-2 Inhibitor II, at 5  $\mu$ M, attenuates glucose-induced MMP-2 activity and expression, as well as subsequent apoptosis, in retinal endothelial cells.<sup>2</sup> It has also been used to examine the role of MMP-2 in rheumatoid synovial fibroblast survival, inflammation, and cartilage degradation.<sup>3</sup>

#### References

- 1. Ikejiri, M., Bernardo, M.M., Bonfil, R.D., et al. Potent mechanism-based inhibitors for matrix metalloproteinases. J. Biol. Chem. 280(40), 33992-34002 (2005).
- 2. Kowluru, R.A. and Kanwar, M. Oxidative stress and the development of diabetic retinopathy: contributory role of matrix metalloproteinase-2. Free Radic. Biol. Med. 46(12), 1677-1685 (2009).
- 3. Xue, M., McKelvey, K., Shen, K., et al. Endogenous MMP-9 and not MMP-2 promotes rheumatoid synovial fibroblast survival, inflammation and cartilage degradation. Rheumatology (Oxford) 53(12), 2270-2279 (2014).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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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