
Product Data Sheet

Product Name: MMP-2 Inhibitor II

Cat. No.: GC13005

Chemical Properties

Cas. No. 869577-51-5

Chemical Name N-[4-[4-[(2-oxiranylmethyl)sulfonyl]phenoxy]phenyl]-methanesulfonamide

SMILES CS(=O)(=O)C(=O)C1=CC=C(S(=O)(=O)C2=CC=C(C=C2)OC3=CC=CC=C3)C=C1

Formula $C_{16}H_{17}NO_6S_2$ M.Wt 383.4

Solubility ≤ 200 mg/ml in DMSO Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure

Background

MMP-2 Inhibitor II is an irreversible, potent and selective MMP-2 inhibitor with K_i value of $2.4 \mu M$ [1].

Matrix metalloproteinases (MMPs) are zinc-dependent endopeptidases that play important roles in physiological and pathological conditions. Two MMPs, gelatinases A and B (MMP-2 and MMP-9, respectively), is highly expressed in human cancer, and a direct relationship between cancer progression and gelatinase expression and activity has been well established [1].

MMP-2 Inhibitor II, an oxirane p-sulfonamido analog of SB-3CT, is an irreversible, potent and selective MMP-2 inhibitor. MMP-2 Inhibitor II inhibited MMP-2, MMP-1 and -7 with K_i values of $2.4 \mu M$, 45 and $379 \mu M$, respectively, and didn't inhibit MMP-3, -7, or -9 [1]. In bovine retinal endothelial cells, MMP-2 Inhibitor II reduced glucose-induced increases in the gelatinolytic activity of MMP-2 and mRNA levels of MMP-2 and MT1-MMP. MMP-2 Inhibitor II also inhibited glucose-induced alterations in TIMP-2 and MT1-MMP gene

Caution: Product has not been fully validated for medical applications. For research use only.

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expressions [2]. MMP-2 Inhibitor II had also been used to examine the role of MMP-2 in rheumatoid synovial fibroblast survival, inflammation, and cartilage degradation [3].

References:

- [1]. Ikejiri M, Bernardo MM, Bonfil RD, et al. Potent mechanism-based inhibitors for matrix metalloproteinases. *J Biol Chem*. 2005 Oct 7;280(40):33992-4002.
- [2]. Kowluru RA, Kanwar M. Oxidative stress and the development of diabetic retinopathy: contributory role of matrix metalloproteinase-2. *Free Radic Biol Med*. 2009 Jun 15;46(12):1677-85.
- [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)*. 2014 Dec;53(12):2270-9.

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