
Product Data Sheet

Product Name: SC 57461A

Cat. No.: GC18011

Chemical Properties

Cas. No. 423169-68-0

Chemical Name 3-[3-(4-benzylphenoxy)propyl-methylamino]propanoic acid;hydrochloride

SMILES CN(CCCOC1=CC=C(C=C1)CC2=CC=CC=C2)CCC(=O)O.ClFormula $C_{20}H_{25}NO_3.HCl$ M.Wt 363.88Solubility $\geq 36.4\text{mg/mL}$ in DMSO Storage Desiccate at 4°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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**

SC-57461A is a selective inhibitor of human recombinant LTB₄ with IC₅₀ value of 49 nM [1].

LTB₄ (leukotriene B (4)) is a leukotriene and plays an important role in inflammation. LTB₄ functions through interacting with the specific cell-surface receptors BLTR1 and BLTR2 [2].

SC-57461A is a potent LTB₄ inhibitor and has a more potent activity than the reported LTA₄ inhibitor RP64966. When tested with PMN cells, administration of SC-57461A significantly inhibited the synthesis of LT that induced by fMLP and PAF by acting on LTB₄-BLTR1 interaction [3].

In fasted CD rat model of calcium ionophore A23187-induced eicosanoid production, oral administration of SC-57461A showed effective inhibition on LTB₄ with ED₅₀ value of 0.3-1.0 mg/kg. When tested with AA-induced edema on the ear, oral administration of SC-57461A resulted in markedly inhibition of edema at doses of 0.8, 4 and 20 mg/kg [1]. It is also been reported that SC-57461A inhibited LTB₄A with Ki values of 23 nM and 27

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nM for epoxide hydrolase and aminopeptidase, respectively [1].

References:

- [1]. Kachur, J.F., et al., *Pharmacological characterization of SC-57461A (3-[methyl[3-[4-(phenylmethyl)phenoxy]propyl]amino]propanoic acid HCl), a potent and selective inhibitor of leukotriene A(4) hydrolase II: in vivo studies. J Pharmacol Exp Ther, 2002. 300(2): p. 583-7.*
- [2]. Filgueiras, L.R., et al., *Leukotriene B4-mediated sterile inflammation promotes susceptibility to sepsis in a mouse model of type 1 diabetes. Sci Signal, 2015. 8(361): p. ra10.*
- [3]. Grenier, S., et al., *Arachidonic acid activates phospholipase D in human neutrophils; essential role of endogenous leukotriene B4 and inhibition by adenosine A2A receptor engagement. J Leukoc Biol, 2003. 73(4): p. 530-9.*

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