

Product data sheet



MedKoo Cat#: 407334 Name: SC-560 CAS#: 188817-13-2 Chemical Formula: C ₁₇ H ₁₂ ClF ₃ N ₂ O Exact Mass: 352.0590 Molecular Weight: 352.74	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

SC-560 is a potent, orally active and selective inhibitor of COX-1. Using human recombinant enzymes, the IC₅₀ value for SC-560 with respect to COX-1 is 9 nM, while the corresponding IC₅₀ value for COX-2 is 6.3 μM. Thus, SC-560 shows 700-fold selectivity for the COX-1 enzyme.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
To be determined	To be determined	To be determined

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.83 mL	14.17 mL	28.35 mL
5 mM	0.57 mL	2.83 mL	5.67 mL
10 mM	0.28 mL	1.42 mL	2.83 mL
50 mM	0.06 mL	0.28 mL	0.57 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Okamoto M, Sakai M, Goto Y, Salim MT, Baba C, Goto K, Watashi K, Shimotohno K, Baba M. Anti-bovine viral diarrhoea virus and hepatitis C virus activity of the cyclooxygenase inhibitor SC-560. *Antivir Chem Chemother.* 2009 Sep 25;20(1):47-54. doi: 10.3851/IMP1372. PMID: 19794231.
- Lampiasi N, Foderà D, D'Alessandro N, Cusimano A, Azzolina A, Tripodo C, Florena AM, Minervini MI, Notarbartolo M, Montalto G, Cervello M. The selective cyclooxygenase-1 inhibitor SC-560 suppresses cell proliferation and induces apoptosis in human hepatocellular carcinoma cells. *Int J Mol Med.* 2006 Feb;17(2):245-52. PMID: 16391822.

In vivo study

- Chang CC, Lee WS, Hsieh HG, Chuang CL, Huang HC, Lee FY, Lee SD. Selective cyclooxygenase inhibition by SC-560 improves hepatopulmonary syndrome in cirrhotic rats. *PLoS One.* 2017 Jun 20;12(6):e0179809. doi: 10.1371/journal.pone.0179809. PMID: 28632747; PMCID: PMC5478154.
- Li W, Wan L, Zhai LY, Wang J. Effects of SC-560 in combination with cisplatin or taxol on angiogenesis in human ovarian cancer xenografts. *Int J Mol Sci.* 2014 Oct 23;15(10):19265-80. doi: 10.3390/ijms151019265. PMID: 25342321; PMCID: PMC4227273.

7. Bioactivity

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Biological target:

SC-560 is a COX-1 inhibitor with an IC₅₀ of 9 nM.

In vitro activity

SC-560 displayed potent antiviral activity against bovine viral diarrhoea virus (BVDV) in cell cultures. SC-560 inhibited BVDV replication without affecting viral entry into host cells and reduced BVDV RNA synthesis in a dose-dependent manner. SC-560's antiviral effects were independent of its known role as a COX inhibitor. Also, SC-560 exhibited selectivity as an inhibitor of hepatitis C virus (HCV) replication.

Reference: Antivir Chem Chemother. 2009 Sep 25;20(1):47-54. <https://pubmed.ncbi.nlm.nih.gov/19794231/>

In vivo activity

In a rat model of hepatopulmonary syndrome induced by liver cirrhosis, SC-560 showed promise in ameliorating hypoxia and reducing intrapulmonary shunts. SC-560 alleviated pulmonary inflammation and angiogenesis by targeting COX-, NFκB- and VEGF-mediated pathways. SC-560 did not affect mortality rates or hemodynamics, suggesting its potential as a therapeutic option for addressing complications associated with hepatopulmonary syndrome in liver cirrhosis.

Reference: PLoS One. 2017 Jun 20;12(6):e0179809. <https://pubmed.ncbi.nlm.nih.gov/28632747/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.