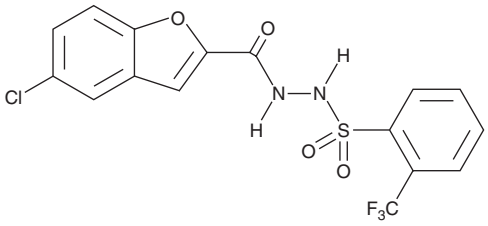
PRODUCT INFORMATION

BCATc Inhibitor 2

Item No. 9002002

CAS Registry No.: 406191-34-2
Formal Name: 5-chloro-2-benzofurancarboxylic acid 2-[[2-(trifluoromethyl)phenyl] sulfonyl]hydrazide
Synonyms: Cytosolic Branched-Chain Amino Acid Transferase Inhibitor 2
MF: $C_{16}H_{10}ClF_3N_2O_4S$
FW: 418.8
Purity: ≥98%
UV/Vis.: λ_{max}: 215, 275 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

BCATc inhibitor 2 is supplied as a crystalline solid. A stock solution may be made by dissolving the BCATc inhibitor 2 in the solvent of choice, which should be purged with an inert gas. BCATc inhibitor 2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of BCATc inhibitor 2 in these solvents is approximately 10, 20, and 25 mg/ml, respectively.

BCATc inhibitor 2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BCATc inhibitor 2 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. BCATc inhibitor 2 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

BCATc inhibitor 2 is a sulfonyl hydrazide that inhibits BCATc (IC_{50}s = 0.81 and 0.2 µM for human and rat, respectively) with 15-fold selectivity over BCATm.[1-3] This compound has been shown to block calcium influx into neurons (IC_{50} = 4.8 µM) following inhibition of glutamate uptake and to demonstrate neuroprotective efficacy in an *in vivo* rat model of neurodegeneration.[2]

References

1. Bora, K., Hu, L.Y., Kesten, S.R., *et al.* Branched chain amino acid-dependent aminotransferase inhibitors and their use in the treatment of neurodegenerative diseases. World Intellectual Property Organization - International Bureau Publication WO 02/24672 A2 **PCT/US01/25892**, (2002).
2. Hu, L.Y., Boxer, P.A., Kesten, S.R., *et al.* The design and synthesis of human branched-chain amino acid aminotransferase inhibitors for treatment of neurodegenerative diseases. *Bioorg. Med. Chem. Lett.* **16(9)**, 2337-2340 (2006).
3. Caballero, J., Vergara-Jaque, A., Fernández, M., *et al.* Docking and quantitative structure-activity relationship studies for sulfonyl hydrazides as inhibitors of cytosolic human branched-chain amino acid aminotransferase. *Mol. Divers.* **13(4)**, 493-500 (2009).

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