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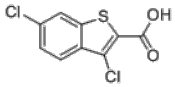
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	BDK inhibitor BT2
Cat. No.	:	PC-49378
CAS No.	:	34576-94-8
Molecular Formula	:	$C_9H_4Cl_2O_2S$
Molecular Weight	:	247.089
Target	:	Other Targets
Solubility	:	10 mM in DMSO



Biological Activity

BDK inhibitor BT2 is a small molecule allosteric inhibitor of **BCKDC kinase** (BDK, branched-chain ketoacid dehydrogenase kinase) with IC50 of 3.19 uM.
BDK inhibitor BT2 significantly increases BCKDC activity in wild-type and MSUD cells the mitochondrial branched-chain α-ketoacid dehydrogenase complex (BCKDC).
BDK inhibitor BT2 binds to the same site in BDK as other known allosteric BDK inhibitors, including (S)-α-cholorophenylproprionate ((S)-CPP).
Administration of BT2 at 20 mg/kg/day to wild-type mice for 1 week leads to nearly complete dephosphorylation and maximal activation of BCKDC in heart, muscle, kidneys, and liver with reduction in plasma BCAA concentrations.
BT2 treatment reduced steatosis and/or inflammation, improved sulin sensitivity in HFD-fed and lean mice.

References

Shih-Chia Tso, et al. ***J Biol Chem***. 2014 Jul 25;289(30):20583-93.

Bollinger E, et al. ***Mol Metab***. 2022 Oct 8:101611.

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