



Data Sheet

Research Use Only

Compound Name

Dorsomorphin Dihydrochloride

Catalog Number

SM03

Alternative Names

AMPK Inhibitor I, BML-275, BMP Inhibitor I, Compound C, 6-[4-(2-Piperidin-1-yl-ethoxy)-phenyl]-3-pyridin-4-yl-pyrazolo[1,5-a]-pyrimidine dihydrochloride

Activity

Dorsomorphin is a BMP pathway inhibitor, which inhibits bone morphogenetic protein type 1 receptors ACTR-I (ALK2), BMPR-IA (ALK3), and BMPR-IB (ALK6). Dorsomorphin, also named as AMPK Inhibitor, has also been shown to play role as a potent and selective inhibitor of AMPK, induced by AICAR and metformin.

Effect

Dorsomorphin promotes cardiomyogenesis in mouse embryonic stem cells (ESC) and induces autophagy in cancer cell lines via a mechanism independent of AMPK inhibition.

Purity

>99%

CAS

1219168-18-9

Formula

C₂₄H₂₅N₅O.2HCl

Molecular Weight

472.41

Solubility

DMSO, water

Stability

Stable at -20°C. Keep away from direct sunlight.

References

1. Zhou, G., et al. 2001. J. Clin. Invest. 108: 1167-1174. PMID: 11602624
2. Kim, E.K., et al. 2004. J. Biol. Chem. 279: 19970-19976. PMID: 15028725
3. McCullough, L.D., et al., 2005. J. Biol. Chem. 280: 20493-20502. PMID: 15772080
4. Ramamurthy, S. and Ronnett, G.V. 2006. J. Physiol. 574: 85-93. PMID: 16690704
5. Yu, P.B., et al. 2008. Nat. Chem. Biol. 4: 33-41. PMID: 18026094