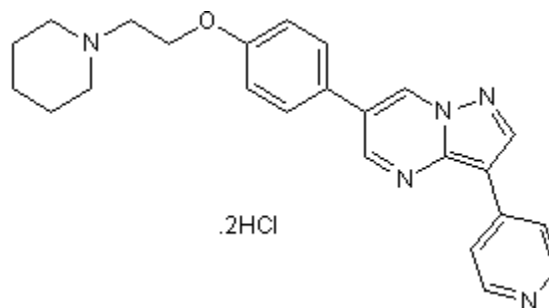


Dorsomorphin dihydrochloride

Cat. No. 3093



Alternative Names: Compound C, BML-275

Chemical Name: 6-[4-[2-(1-Piperidinyl)ethoxy]phenyl]
[1,3-(4-pyridinyl)-pyrazolo[1,5-a]pyrimidine dihydrochloride

Biological Activity

Potent and selective inhibitor of AMP-activated protein kinase (AMPK) ($K_i = 109$ nM). Displays no significant activity on several structurally related kinases including ZAPK, SYK, PKC θ , PKA and JAK3. Inhibits AMPK activation induced by [AICAR](#) (Cat. No. 2840) and [metformin](#) (Cat. No. 2864). Also inhibits bone morphogenetic protein (BMP) type I receptors (ALK2, ALK3 and ALK6). Promotes cardiomyogenesis in mouse embryonic stem cells (ESCs) *in vitro*. Shown to induce autophagy in cancer cell lines via a mechanism independent of AMPK inhibition.

Technical Data

M.Wt:

472.41

Purity:

>98 %

Formula:

C₂₄H₂₅N₅O.2HCl

Storage:

Desiccate at RT

Solubility:

Soluble to 100 mM in water and to 10 mM in DMSO

CAS No:

1219168-18-9

The technical data provided above is for guidance only.

For batch specific data refer to the Certificate of Analysis.

References

Zhou *et al* (2001) Role of AMP-activated protein kinase in mechanism of metformin action. J.Clin.Invest. **108** 1167. PMID: [11602624](#).

Hao *et al* (2008) Dorsomorphin, a selective small molecule inhibitor of BMP signaling, promotes cardiomyogenesis in embryonic stem cells. PLoS ONE **3** 2904. PMID: [18682835](#).

Yu *et al* (2008) Dorsomorphin inhibits BMP signals required for embryogenesis and iron metabolism. Nat.Chem.Biol. **4** 33. PMID: [18026094](#).

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Vucicevic *et al* (2011) Compound C induces protective autophagy in cancer cells through AMPK inhibition-independent blockade of Akt/mTOR pathway. *Autophagy* 7 40. PMID: [20980833](#).

If you know of a relevant citation for this product [please let us know](#).

Keywords: Dorsomorphin dihydrochloride, supplier, Potent, selective, AMPK, inhibitors, BMP, type, I, receptor, ALK2, ALK3, ALK6, AMP-Activated, Protein, Kinases, Receptors, Activin, Receptor-like, Receptor, Serine/Threonine, RSTKs, stem, cells, BML275

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