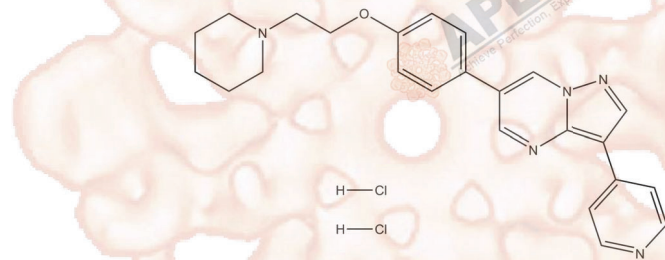


Product Data Sheet

Dorsomorphin 2HCl

Cat. No.:	B1372
CAS No.:	1219168-18-9
Formula:	C ₂₄ H ₂₅ N ₅ O·2HCl
M.Wt:	472.41
Synonyms:	
Target:	PI3K/Akt/mTOR Signaling
Pathway:	AMPK
Storage:	Store at -20°C



Solvent & Solubility

≥5.9mg/mL in DMSO, insoluble in EtOH, <6.74 mg/mL in H₂O, ≥11.34 mg/mL in 0.9% NS

In Vitro

Preparing Stock Solutions	Solvent Concentration	Mass		
		1mg	5mg	10mg
	1 mM	2.1168 mL	10.5840 mL	21.1681 mL
	5 mM	0.4234 mL	2.1168 mL	4.2336 mL
	10 mM	0.2117 mL	1.0584 mL	2.1168 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

AMPK inhibitor

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line:	mouse pulmonary artery smooth muscle cells (PASMCs), Hep3B cells
Preparation method:	The solubility of this compound in DMSO is limited. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0.1-20 μM for 30 min
Applications:	Dorsomorphin (4 μM) inhibited osteogenic differentiation in C2C12 cells and

suppressed BMP-mediated SMAD activation by blocking BMP type I receptor function. Moreover, treatment with dorsomorphin (1 μ M) blocked BMP- and HJV-mediated hepcidin expression in cultured hepatoma-derived cells.

Animal experiment

Animal models: Zebrafish embryos model; Wild-type (WT) C57BL/6 adult mice model

Dosage form: 10 mM dorsomorphin for 30 h; or 10 mg/ kg, intraperitoneal injection

Applications: Dorsomorphin induced dorsalization in zebrafish embryos model. Moreover, Dorsomorphin inhibited bone mineralization in vivo. Additionally, Dorsomorphin (10 mg/ kg) induced hyperferremia in mice.

Other notes: Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

In Vivo

Product Citations

See more customer validations on www.apexbt.com.

References

1. Zhou, G., Myers, R., Li, Y., Chen, Y., Shen, X., Fenyk-Melody, J., Wu, M., Ventre, J., Doebber, T., Fujii, N., Musi, N., Hirshman, M. F., Goodyear, L. J. and Moller, D. E. (2001) Role of AMP-activated protein kinase in mechanism of metformin action. J Clin Invest. 108, 1167-1174
2. Yu, P. B., Hong, C. C., Sachidanandan, C., Babbitt, J. L., Deng, D. Y., Hoyng, S. A., Lin, H. Y., Bloch, K. D. and Peterson, R. T. (2008) Dorsomorphin inhibits BMP signals required for embryogenesis and iron metabolism. Nat Chem Biol. 4, 33-41

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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