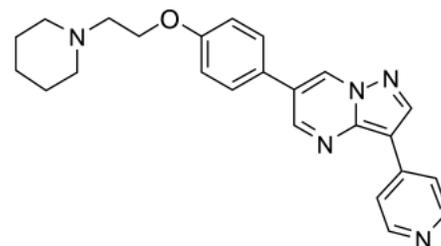


Dorsomorphin

Catalog Number: ST10032



Size	2 mg
Description	Dorsomorphin inhibits the BMP pathway by targeting the type I receptors ALK2, ALK3, and ALK6. It is also a potent inhibitor of AMPK ($K_i = 109$ nM) but does not significantly inhibit structurally related kinases such as JAK3, PKC θ , ZAPK, SYK, or PKA. Dorsomorphin has been shown to promote differentiation of neural progenitor cells from human pluripotent stem cells. In addition, it has also been shown to promote differentiation of cardiomyocytes from mouse and human pluripotent stem cells.
Molecular Weight	399.49
Molecular Formula	C ₂₄ H ₂₅ N ₅ O
Chemical Name	6-[4-(2-piperidin-1-ylethoxy)phenyl]-3-pyridin-4-ylpyrazolo[1,5-a]pyrimidine
CAS Number	866405-64-3
PubChem Identifier	11524144
Appearance	Yellow solid
Purity	>96% by HPLC analysis
Solubility	Soluble in DMSO at 5 mM
Reconstitution	For a 5 mM concentrated stock solution, reconstitute the compound by adding 1.0 mL of DMSO to the entire contents of vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes.
Recommended Usage	For use in cell culture, warm medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 μ M low-protein binding filter. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%.
Storage and Stability	Solid: Shipped at room temperature. Store at -20°C. Stable for 6 months when stored as directed. Solution: Following reconstitution, store aliquots in tightly sealed vials at -20°C. Avoid repeated freeze-thaw cycles.
References	<p>Bain, J., et al. (2007) The selectivity of protein kinase inhibitors: a further update. <i>Biochem J</i> 408: 297-315. PMID: 17850214.</p> <p>Hao, J., et al. (2008) Dorsomorphin, a selective small molecule inhibitor of BMP signaling, promotes cardiomyogenesis in embryonic stem cells. <i>PLoS One</i> 3(8): e2904. PMID: 18682835.</p> <p>Yu, P.B., et al. (2008) Dorsomorphin inhibits BMP signals required for embryogenesis and iron metabolism. <i>Nat Chem Biol</i> 4: 33-41. PMID: 18026094.</p> <p>Zhou, J., et al. (2010) High-efficiency induction of neural conversion in human ESCs and human induced pluripotent stem cells with a single chemical inhibitor of transforming growth factor beta superfamily receptors. <i>Stem Cells</i> 28: 1741-1750. PMID: 20734356.</p>

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