



Catalog Number:	MC11063	Product Type:	Small Molecule
Bio-Activity:	ALK 2, 3 inhibitor	CAS #:	1435934-00-1
Research Categories:	Stem cells, neuroscience, cancer	Chemical Name:	4-[6-[4-(1-Piperazinyl)phenyl]pyrazolo[1,5-a]pyrimidin-3-yl]-quinoline, dihydrochloride
Solubility:	Soluble in DMSO or in Water (up to 5 mg/ml)	Molecular Formula:	C25H22N6·2HCl
Purity:	> 98%	Molecular Weight:	479.4
Format:	Powder	Ship Temp:	Ambient
Storage:	-20°C		

Application Notes

Description/Data:

LDN-193189 2HCl is a potent and selective inhibitor of ALK2 (IC₅₀ = 5 nM) and ALK3 (IC₅₀ = 30 nM), thereby inhibiting SMAD1/5/8 phosphorylation [1]. Only weak inhibition of ALK4, ALK5, and ALK7 is observed. Promotes neuronal differentiation of human pluripotent stem cells [2,3]. LDN-193189 HCl has also been used to examine the role of osteogenesis in prostate tumor metastases in bone [4].

References:

- 1) Yu et al. (2008), BMP type 1 receptor inhibition reduces heterotropic ossification; Nat. Med., 14(12) 1363
- 2) Chambers et al. (2012), Combined small-molecule inhibition accelerates developmental timing and converts human pluripotent stem cells into nociceptors; Nature Biotechnol. 30 715
- 3) Kreitzer et al. (2013) A robust method to derive functional neural crest cells from human pluripotent stem cells; Am. J. Stem Cells, 2 119
- 4) Lee et al. (2011) BMP4 promotes prostate tumor growth in bone through osteogenesis; Cancer Res. 71 5194

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