



# LDN193189 HCl

## Data Sheet

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

### Application Notes

#### Description/Data:

LDN-193189 2HCl is a potent and selective inhibitor of ALK2 (IC<sub>50</sub> = 5 nM) and ALK3 (IC<sub>50</sub> = 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 heterotopic 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

### FOR RESEARCH USE ONLY

NEUROMICS' REAGENTS ARE FOR IN VITRO AND CERTAIN NON-HUMAN IN VIVO EXPERIMENTAL USE ONLY AND NOT INTENDED FOR USE IN ANY HUMAN CLINICAL INVESTIGATION, DIAGNOSIS, PROGNOSIS, OR TREATMENT. THE ABOVE ANALYSES ARE MERELY TYPICAL GUIDES. THEY ARE NOT TO BE CONSTRUED AS BEING SPECIFICATIONS. ALL OF THE ABOVE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. HOWEVER, SINCE THE CONDITIONS OF USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS OR SUGGESTIONS ARE MADE WITHOUT GUARANTEE, EXPRESS OR IMPLIED, ON OUR PART. WE DISCLAIM ALL LIABILITY IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED HEREIN OR OTHERWISE, AND ALL SUCH RISKS ARE ASSUMED BY THE USER. WE FURTHER EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.-V2/08/2012