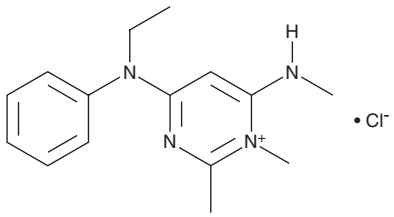
PRODUCT INFORMATION

ZD 7288

Item No. 15228

CAS Registry No.:	133059-99-1
Formal Name:	N-ethyl-1,6-dihydro-1,2-dimethyl-6-(methylimino)-N-phenyl-4-pyrimidinamine, monohydrochloride
Synonym:	ICI-D 7288
MF:	$C_{15}H_{21}N_4 \bullet Cl$
FW:	292.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 241, 285 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

ZD 7288 is supplied as a crystalline solid. A stock solution may be made by dissolving the ZD 7288 in the solvent of choice. ZD 7288 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ZD 7288 in ethanol is approximately 50 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ZD 728 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ZD 7288 in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated (HCN) channels contribute to native pacemaker currents in heart and neurons and modulate cardiac and neuronal excitability.[1] Certain HCN channels also accentuate neuropathic pain.[2] ZD 7288 is a potent blocker of HCN channels that inhibits HCN4 more potently than HCN1 (IC_{50}s = 32 and 158 nM, respectively).[3] Through its effects on HCN channels, ZD 7288 modulates the sinoatrial node and slows heart rate.[4,5] In addition, ZD 7288 reduces neuropathic pain in several animal models.[6,7]

References

1. Herrmann, S., Schnorr, S., and Ludwig, A. *Int. J. Mol. Sci.* **16**, 1429-1447 (2015).
2. Wickenden, A.D., Maher, M.P., and Chaplan, S.R. *Curr. Pharm. Des.* **15**, 2149-2168 (2009).
3. McClure, K.J., Maher, M., Wu, N., *et al. Bioorg. Med. Chem. Lett.* **21**, 5197-5201 (2011).
4. BoSmith, R.E., Briggs, I., and Sturgess, N.C. *Br. J. Pharmacol.* **110(1)**, 343-349 (1993).
5. Rouse, W. and Johnson, I.R. *Br. J. Pharmacol.* **113(3)**, 1064-1070 (1994).
6. Luo, L., Chang, L., Brown, S.M., *et al. Neuroscience* **144**, 1477-1485 (2007).
7. Chen, Y., Lin, C., Tang, Y., *et al. World J. Gastroenterol.* **20(8)**, 2091-2097 (2014).

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