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DATASHEET

ZD 7288

Product overview

| | |
|--------------------------|---|
| Name | ZD 7288 |
| Cat No | HB1152 |
| Alternative names | ICI D7288 |
| Biological action | Blocker |
| Purity | >98% |
| Customer comments | <i>Works great. I used this compound for some time. It works great!</i> Verified customer, Karolinska Institutet |
| Description | HCN channel blocker. Modulates sino-atrial node function. |

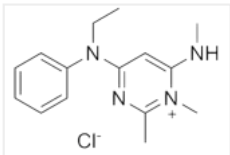
Biological Data

| | |
|-------------------------------|---|
| Biological description | Hyperpolarization-activated, cyclic nucleotide-gated cation (HCN) channel blocker ($IC_{50} = 15.0 \mu M$). Modulates sino-atrial node function; blocks the hyperpolarization-activated inward current I_f and inhibits I_h in central neurons. Also inhibits Na^+ currents in dorsal root ganglion neurons ($IC_{50} = 1.17 \mu M$). Blocks long term potentiation (LTP) induction and displays anxiolytic properties. Also increases doubling time of embryonic stem cells (ESCs) and modulates differentiation outcomes. Active <i>in vivo</i> . |
|-------------------------------|---|

Solubility & Handling

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|-----------------------------|---|
| Storage instructions | +4 °C (desiccate) |
| Solubility overview | Soluble in water (100mM) or DMSO (100mM) |
| Important | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use. |

Chemical Data

| | |
|---------------------------|---|
| Chemical name | 4-Ethylphenylamino-1,2-dimethyl-6-methylaminopyrimidinium chloride |
| Molecular Weight | 292.81 |
| Chemical structure |  |
| Molecular Formula | $C_{15}H_{21}ClN_4$ |
| CAS Number | 133059-99-1 |
| PubChem identifier | 123983 |
| SMILES | <chem>CCN(C1=CC=CC=C1)C2=CC(=NC)N(C(=N2)C)C.Cl</chem> |
| Source | Synthetic |
| InChi | InChI=1S/C15H20N4.ClH/c1-5-19(13-9-7-6-8-10-13)15-11-14(16-3)18(4)12(2)17-15;/h6-11H,5H2,1- |

InChiKey
MDL number
Appearance

4H3;1H
DUWKUHWHTPRMAP-UHFFFAOYSA-N
MFCD16879001
White solid

References

Is ZD7288 a selective blocker of hyperpolarization-activated cyclic nucleotide-gated channel currents?

Wu X *et al* (2012) Channels (Austin) 6(6)

PubMedID [22989944](#)

Intrahippocampal infusion of the Ih blocker ZD7288 slows evoked theta rhythm and produces anxiolytic-like effects in the elevated plus maze.

Yeung M *et al* (2013) Hippocampus 23(4)

PubMedID [23280856](#)

Inhibitory actions of ZENECA ZD7288 on whole-cell hyperpolarization activated inward current (I_f) in guinea-pig dissociated sinoatrial node cells.

BoSmith RE *et al* (1993) Br J Pharmacol 110(1)

PubMedID [7693281](#)

ZD7288, a blocker of the HCN channel family, increases doubling time of mouse embryonic stem cells and modulates differentiation outcomes in a context-dependent manner.

Omelyanenko *et al* (2016) Springerplus 16

PubMedID [26835223](#)
