

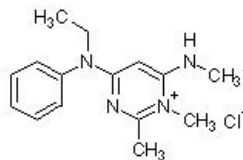
ZD7288, Sino-atrial node function modulator ab120102

[24 References](#) [2 Images](#)

Overview

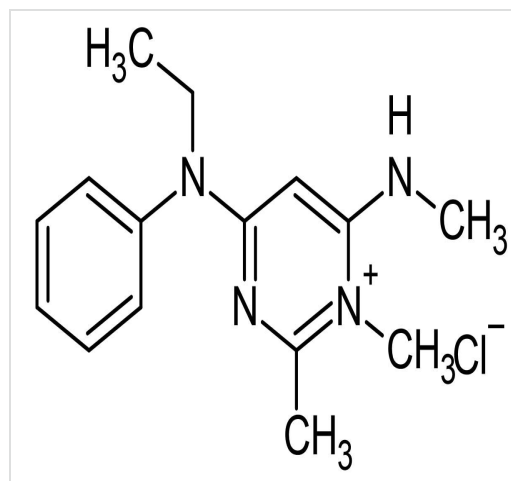
| | |
|-------------------------------|---|
| Product name | ZD7288, Sino-atrial node function modulator |
| Description | Sino-atrial node function modulator |
| Biological description | Sino-atrial node function modulator; blocks the hyperpolarisation activated inward current I_h . Also inhibits I_h in central neurons and inhibits synaptic transmission. |
| CAS Number | 133059-99-1 |

Chemical structure



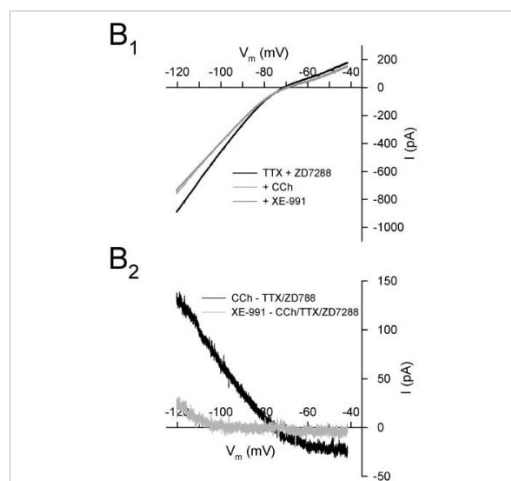
Properties

| | |
|-----------------------------|--|
| Chemical name | 4-Ethylphenylamino-1,2-dimethyl-6-methylaminopyrimidinium chloride |
| Molecular weight | 292.81 |
| Molecular formula | $C_{15}H_{21}ClN_4$ |
| PubChem identifier | 123983 |
| Storage instructions | Store at +4°C. Store under desiccating conditions. The product can be stored for up to 12 months. |
| Solubility overview | Soluble in water to 100 mM |
| Handling | Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour. Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details. |
| SMILES | <chem>[Cl-].C[n+]1c(NC)cc(nc1C)N(CC)c2ccccc2</chem> |
| Source | Synthetic |



2D chemical structure image of ab120102, ZD7288, Sino-atrial node function modulator

Chemical Structure - ZD7288, Sino-atrial node function modulator (ab120102)



Membrane currents during slow voltage ramps from -120 mV to -40 mV in the presence of TTX ($0.5 \mu\text{M}$) and ZD7288 ($50 \mu\text{M}$), and during subsequent bath application of CCh (light grey line; $50 \mu\text{M}$; B1) show that cholinergic receptor activation induces an inward current at voltages near resting membrane potential that reverses around -76 mV, consistent the blockade of outward K^+ currents. The application of CCh occluded additional inward current during subsequent bath application of XE-991 (dark grey line; $10 \mu\text{M}$) suggesting that CCh depolarizes PaS neurons in part by suppression of the M-current. Current subtractions show that CCh blocks an outward current that reverses at -83.3 ± 7.0 mV (black line; B2), and also occluded membrane currents normally induced by XE-991 (grey line).

Cellular activation - ZD7288, Sino-atrial node function modulator (ab120102)

Image from Glasgow D, et al. Plos One, 8(3), e58901. Fig 6B; doi: 10.1371/journal.pone.0058901

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