5-(N,N-Dimethyl)amiloride hydrochloride

Product Number  A 4562
Storage Temperature  2-8 °C

Product Description
Molecular Formula:  C₈H₁₂ClN₇O • HCl
Molecular Weight:  294.1
CAS Number:  1 214-79-5
Synonym:  DMA

DMA is an inhibitor of the Na⁺/H⁺ pump in muscle membranes. It has been used to reduce cardiac dysfunction following ischemic injury to perfused rat ventricle.¹ Studies with ouabain indicated that this effect was due to blockade of sarcolemmal Na⁺ uptake into the cardiac muscle.

Both amiloride and DMA have been shown to inhibit the epidermal growth factor-induced (EGF) pH changes in chicken granulosa cells.² While EGF alone increased the pH by 0.18 pH units, the EGF-induced cytosolic alkalinization was significantly reduced by DMA and amiloride (by 54% and 51%, respectively). The studies suggest that EGF may increase intracellular pH by activating the Na⁺/H⁺ antiporter system.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
DMA is soluble at 100 µM in 20 mM sodium bicarbonate buffer, pH 7.4 containing 120 mM NaCl, 6 mM KCl, 1 mM MgCl₂, 1 mM CaCl₂, and 10 mM glucose.¹

References

MWM/AJH  11/02

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