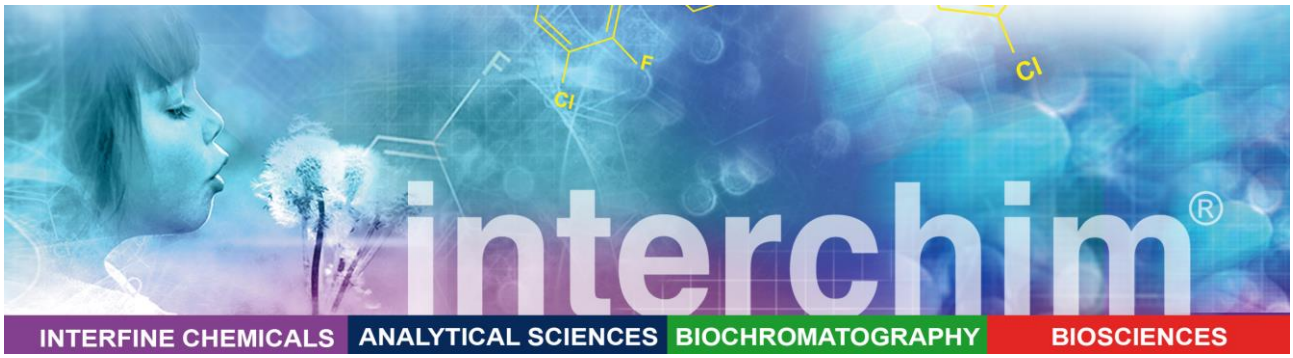
FT-B5Y2V1

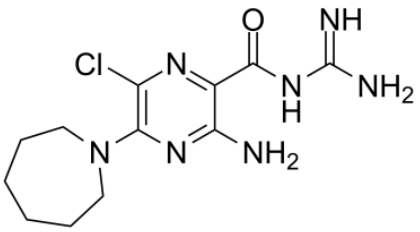


Hexamethylene amiloride

Product Description

Catalog #: B5Y2V0, 5mg B5Y2V1, 10mg B5Y2V2, 50mg
852420, 1ml 10mM in DMSO.

Name: **5-(N,N-Hexamethylene)-amiloride**
Syn.: Hexamethylene amiloride, HMA
2-Pyrazinecarboxamide, 3-amino-N-(aminoiminomethyl)-6-chloro-5-(hexahydro-1H-azepin-1-yl)-
CAS : 1428-95-1



MW : 311.77

Properties : White to off-white powder
Appearance: Light yellow to yellow (Solid)
1 H NMR Spectrum consistent with structure
LCMS:consistent with structure
Purity (LCMS): 98.14%

Storage: -20°C (long term; 2-3 years) (M)

For Research Use Only

5-(N,N-3.2075 mL (Hexamethylene amiloride) derives from an amiloride and is a potent Na+/H+ exchanger inhibitor, which decreases the intracellular pH (pHi) and induces apoptosis in leukemic cells. 5-(N,N-Hexamethylene)-amiloride (Hexamethylene amiloride) is also an inhibitor of the HIV-1 Vpu virus ion channel and inhibits mouse hepatitis virus (MHV) replication and human coronavirus 229E (HCoV229E) replication in cultured L929 cells with EC50s of 3.91 μM and 1.34 μM, respectively. [1].[2].

BioActivity

IC50 & Target : Na+/H+ exchanger[1].
EC50: 3.91 μM (MHV replication), 1.34 μM (HCoV229E replication)[2].

In Vitro

*Solubility : DMSO : 50 mg/mL (75.00 mM; Need ultrasonic)
H2O : 2 mg/mL (3.00 mM; Need ultrasonic)
*Preparation : 1mM = 1mg in 3.2075mL

*Activity :
Targets: Inhibitor of Na^+/H^+ antiport:
Pathway ::Membrane Transporter/Ion Channel; Sodium Channel; HIV; Apoptosis;

*Gene Information :
human ... SCNN1A(6337), SCNN1B(6338), SCNN1D(6339), SCNN1G(6340), SLC9A1(6548), SLC9A5(6553)
mouse ... Scnn1a(20276), Scnn1b(20277), Scnn1d(140501), Scnn1g(20278)
rat ... Scnn1a(25122), Scnn1b(24767), Scnn1g(24768), Slc9a1(24782), Slc9a3(24784)

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In Vivo

*Preparation :

1. Add each solvent one by one: 10% DMSO 40% PEG300 5% Tween-80 45% saline
   Solubility: 2.08 mg/mL (6.67 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.67 mM); Clear solution
3. Add each solvent one by one: 10% DMSO 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.67 mM); Clear solution

*Activity :

Anti-infection ; HIV; Apoptosis ; Autophagy

References

[1]. Rich IN, et al. Apoptosis of leukemic cells accompanies reduction in intracellular pH after targeted inhibition of the Na(+)/H(+) exchanger. Blood. 2000 Feb 15;95(4):1427-34.

[2]. Wilson L, et al. Hexamethylene amiloride blocks E protein ion channels and inhibits coronavirus replication. Virology. 2006 Sep 30;353(2):294-306. Epub 2006 Jul 3.

Safety

Symbol GHS06
Signal word : Danger
UN 2811 6.1 / PGIII (RID, ADR)
Hazard statements : H301 + H311 + H331
Precautionary statements P280 - P301 + P310 + P330 - P302 + P352 + P312 - P304 + P340 + P311
Personal Protective Equipment Eyeshields, Faceshields, Gloves, type P2 (EN 143) respirator cartridges

Related products

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Amiloride #()

Syn.: K-870

Amiloride (MK-870) is an inhibitor of both epithelial sodium channel (ENaC) and urokinase-type plasminogen activator receptor (uTPA). Amiloride is a blocker of polycystin-2 (PC2; TRPP2) channel.

Targets: Sodium Channel TRP Channel Apoptosis Metabolic Disease Cardiovascular Disease

Amiloride hydrochloride #( )

Syn.: MK-870 hydrochloride

Amiloride hydrochloride (MK-870 hydrochloride) is an inhibitor of both epithelial sodium channel (ENaC) and urokinase-type plasminogen activator receptor (uTPA). Amiloride hydrochloride is a blocker of polycystin-2 (PC2; TRPP2) channel.

Targets: Sodium Channel TRP Channel Apoptosis Metabolic Disease Cardiovascular Disease

;Amiloride hydrochloride dihydrate #AYHJ40(

Syn.: MK-870 hydrochloride dihydrate

Amiloride hydrochloride dihydrate (MK-870 hydrochloride dihydrate) is an inhibitor of both epithelial sodium channel (ENaC) and urokinase-type plasminogen activator receptor (uTPA). Amiloride hydrochloride dihydrate is a blocker of polycystin-2 (PC2; TRPP2) channel.

Targets: Sodium Channel Apoptosis TRP Channel Metabolic Disease Cardiovascular Disease

.5-(N,N-Hexamethylene)-amiloride #B5Y2V1()

Syn.: Hexamethylene amiloride; HMA

5-(N,N-Hexamethylene)-amiloride (Hexamethylene amiloride) derives from an amiloride and is a potent Na +/H + exchanger inhibitor, which decreases the intracellular pH (pHi) and induces apoptosis in leukemic cells. It is also an inhibitor of the HIV-1 Vpu virus ion channel and inhibits mouse hepatitis virus (MHV) replication and human coronavirus 229E (HCoV229E) replication in cultured L929 cells with EC50s of 3.91 μM and 1.34 μM, respectively.

Targets: Sodium Channel HIV Apoptosis Cancer Infection

.Benzamil #()

Syn.: Benzylamiloride

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Benzamil (Benzylamiloride), an Amiloride analogue, is a Na +/Ca 2+ exchanger (NCX) inhibitor (IC50~100 nM). Benzamil also is a non-selective Deg/epithelial sodium channels (ENaC) blocker, and can potentiate myogenic vasoconstriction. Benzamil inhibits TRPP3-mediated Ca 2+-activated currents, with an IC50 of 1.1 μM.

Targets: Sodium Channel Na+/Ca2+ Exchanger Neurological Disease

.Benzamil hydrochloride #AX5UO0()

Syn.: Benzylamiloride hydrochloride

Benzamil hydrochloride (Benzylamiloride hydrochloride), an Amiloride analogue, is a Na +/Ca 2+ exchanger (NCX) inhibitor (IC50~100 nM). It also is a non-selective Deg/epithelial sodium channels (ENaC) blocker, and can potentiate myogenic vasoconstriction. it inhibits TRPP3-mediated Ca 2+-activated currents, with an IC50 of 1.1 μM.

Targets: Na+/Ca2+ Exchanger Sodium Channel Neurological Disease

-Phenamil methanesulfonate #()

Phenamil methanesulfonate, an analog of Amiloride (HY-B0285), is a more potent and less reversible epithelial sodium channel (ENaC) blocker with an IC50 of 400 nM. Phenamil methanesulfonate is also a competive inhibitor of TRPP3 and inhibits TRPP3-mediated Ca 2+ transport with an IC50 of 140 nM in a Ca 2+ uptake assay. Phenamil methanesulfonate is an intriguing small molecule to promote bone repair by strongly activating BMP signaling pathway. Phenamil methanesulfonate is used for the research of cystic fibrosis lung disease.

Targets: Sodium Channel TRP Channel Metabolic Disease Inflammation/Immunology

- Autophagy | Apoptosis
- Other BioActive Compounds [PW505]

Ordering information

Catalog size quantities and prices may be found at http://www.interchim.com.
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