

Neomycin (sulfate)

Catalog No: tcsc2584



Available Sizes

Size: 10 mM * 1 mL in Water

Size: 10g



Specifications

CAS No:

1405-10-3

Formula:

$C_{23}H_{52}N_6O_{25}S_3$

Pathway:

Membrane Transporter/Ion Channel;Anti-infection

Target:

Calcium Channel;Bacterial

Purity / Grade:

>98%

Solubility:

H₂O : ≥ 31 mg/mL (34.11 mM)

Storage Instruction:

Powder -20°C for 3 years 4°C for 2 years In solvent -80°C for 6 months -20°C for 1 month

Observed Molecular Weight:

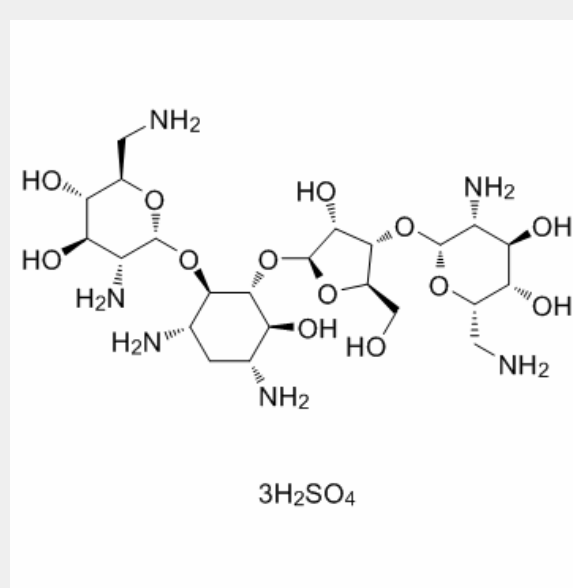
908.88

Product Description

Neomycin sulfate is an aminoglycoside antibiotic and **calcium channel** inhibitor.

In Vitro:

Neomycin inhibits thrombin-stimulated release of inositol 1,4,5-trisphosphate (IP_3), by selectively binding PIP_2 , but does not inhibit ^{32}P incorporation into PI or initiation of DNA synthesis. Neomycin (10 μM -1 mM) induces considerable release of [3H]arachidonic acid from phosphatidylinositol, phosphatidylcholine and phosphatidylethanolamine in saponin-permeabilized human platelets prelabeled with [3H]arachidonic acid. Moreover, neomycin enhances arachidonic acid release induced by thrombin. Addition of neomycin (100 μM) to $^{45}Ca^{2+}$ -preloaded platelets elicits $^{45}Ca^{2+}$ mobilization from intracellular stores. Neomycin (0-10 mM) inhibits guanosine 5'-[gamma-thio]triphosphate-stimulated PLD activity in digitonin-permeabilized NG108-15 cells in a concentration-dependent manner (50% inhibition at 100 μM). Neomycin similarly inhibits PLD activity present in rat brain membranes and assayed in vitro with [3H]phosphatidylcholine as substrate (50% inhibition at 65 μM). Neomycin (5 mM) causes reversible reductions in the level of intracellular Ca^{2+} , but PtdIns(4,5)P₂ is not required for the channel activity.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!