

Product Data Sheet

Product Name: Acetazolamide sodium

Cat. No.: GC65612

Chemical Properties

Cas. No. 1424-27-7

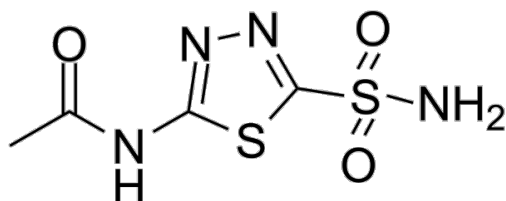
Formula $C_4H_6N_4NaO_3S_2$ M.Wt 245.24

Solubility DMSO : 100 mg/mL (407.76 mM; Storage 4°C, away from moisture
Need ultrasonic)

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Na

Background

Caution: Product has not been fully validated for medical applications. For research use only.

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Acetazolamide sodium is a **carbonic anhydrase (CA) IX** inhibitor with an **IC₅₀** of 30 nM for **hCA IX**. Acetazolamide sodium has diuretic, antihypertensive and anti-gonococcal activities^{[1][4][5][6]}.

Acetazolamide also inhibits hCA II with an IC₅₀ of 130 nM^[1].

Acetazolamide (Ace) is a small heteroaromatic sulfonamide that binds to various carbonic anhydrases with high affinity, acting as a carbonic anhydrase (CA) inhibitor^[2].

Compared with the control group, the high Acetazolamide concentration (AceH, 50 nM), Cisplatin (Cis; 1 µg/mL) and Cis combined with the low Acetazolamide concentration (AceL, 10 nM) treatments significantly reduces viability of Hep-2 cells^[2].

Treatment with the Acetazolamide/Cis combination significantly increases the expression levels of P53, as both AceL+Cis and AceH+Cis treatments result in significantly increased P53 protein expression levels compared with the control group. The Ace/Cis combination treatment significantly reduces the bcl-2/bax expression ratio, and increases the expression of caspase-3 protein, compared with the control group. AceL, AceH, Cis and AceL+Cis treatments significantly reduce the bcl-2/bax ratio compared with the control group^[2].

Combined Ace and Cis treatment effectively promotes apoptosis in Hep-2 cells^[2].

Combined treatment with Ace/Cis markedly decreases the expression of AQP1 mRNA in Hep-2 cells. Both AceH and AceL+Cis treatments decrease the expression of aquaporin-1 (AQP1) mRNA in Hep-2 cells compared with the control group^[2].

Acetazolamide (40 mg/kg) significantly potentiates the inhibitory effect of MS-275 on tumorigenesis in neuroblastoma (NB) SH-SY5Y xenografts^[3].

Acetazolamide (40 mg/kg) and/or MS-275 treatment reduce expression of HIF1-α and CAIX in NB SH-SY5Y xenograft^[3].

Acetazolamide (40 mg/kg), MS-275 and Acetazolamide+MS-275 reduce expression of mitotic and proliferative markers in NB SH-SY5Y xenografts^[3]. Acetazolamide (50 mg/kg; PO, for 3 days) significantly reduces the gonococcal load in the vagina of infected mice by 90%^[6].

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