Web: www.taiclone.com
Tel: +886-2-2735-9682
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Acetazolamide

Catalog No: tcsc3568

Available Sizes

Size: 1g

Size: 5g

Specifications

CAS No:
59-66-5

Formula:
$C_4H_6N_4O_3S_2$

Pathway:
Metabolic Enzyme/Protease;Autophagy

Target:
Carbonic Anhydrase;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 41 mg/mL (184.48 mM)

Observed Molecular Weight:
222.25

Product Description

Acetazolamide is a **carbonic anhydrase** (**CA**) **IX** inhibitor with an **IC_{50}** of 30 nM for **hCA IX**[1]. Diuretic effects[4].

IC50 & Target: IC50: 30 nM (hCA IX), 130 nM (hCA II)[1]

In Vitro: Acetazolamide also inhibits hCA II with an IC_{50} of 130 nM[1].

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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].

In Vivo: 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].