

Product Data Sheet

Product Name: Adenosine amine congener

Cat. No.: GC38884

Chemical Properties

Cas. No. 96760-69-9

SMILES OC[C@H]1[C@H]([C@H]([C@H](N2C=NC3=C2N=CN=C3NC4=CC=C(CC(NC5=CC=C(C(CCN)=O)C=C5)=O)C=C4)O1)O)O

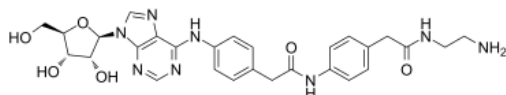
Formula $C_{28}H_{32}N_8O_6$ M.Wt 576.6

Solubility DMSO: 31.25 mg/mL (54.20 mM) Storage Store at -20°C

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



Background

Adenosine amine congener (ADAC) is a selective A1 adenosine receptor agonist, can ameliorate noise- and Cisplatin-induced cochlear injury. Adenosine amine congener also has neuroprotective effects[1][2].

Adenosine amine congener can reduce oxidative stress in the noise-exposed cochlea, leading to protection of sensory hair cells. Adenosine amine congener also can reduce cisplatin-induced

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

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apoptosis in cochlear tissues, particularly in sensory hair cells and stria marginal cells. The mechanisms of otoprotection by Adenosine amine congener include inhibition of glutamate release via presynaptic A1 receptors and inhibition of voltage-gated Ca²⁺ channels, which can prevent activation of apoptotic and necrotic cell death pathways[1].

Adenosine amine congener (25-300 µg/kg/day; intraperitoneal injection; daily; for 5 days; male Wistar rats) treatment is most effective in the first 24 hours after noise exposure at doses >50 µg/kg, providing up to 21 dB protection. Adenosine amine congener mitigates noise-induced hearing loss in a dose- and time-dependent manner[1]. Animal Model: Male Wistar rats (8-10 weeks old) treated with noise exposure[1]

[1]. Vlakovic SM, et al. Adenosine amine congener as a cochlear rescue agent. Biomed Res Int. 2014;2014:841489. [2]. Vlakovic SM, et al. Adenosine amine congener mitigates noise-induced cochlear injury. Purinergic Signal. 2010 Jun;6(2):273-81.

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