
Product Data Sheet

Product Name: 8-Aminoadenine

Cat. No.: GC13274

Chemical Properties

Cas. No. 28128-33-8

Chemical Name 7H-purine-6,8-diamine

SMILES NC1=NC2=NC=NC(N)=C2N1

Formula $C_5H_6N_6$ M.Wt 150.14

Solubility <15.01mg/ml in 2eq.HCl; <7.51mg/ml in DMSO 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

8-Aminoadenine is an agonist of adenine receptor with K_i value of 0.0341 μM [1].

Adenine receptor is a G protein-coupled receptor activated by the nucleoside adenosine. There are four types of adenosine receptors: A1, A2A, A2B and A3. A1 and A2A receptors play an important role in the heart, regulating coronary blood flow and myocardial oxygen consumption. A2B and A3 receptors are involved in inflammation and immune responses.

8-Aminoadenine is an adenine receptor agonist with K_i values of 0.0341 and 6.51 μM for human and rat, respectively. In HEK293 cell membrane, 8-Aminoadenine was more potent than adenine ($K_i = 0.0471 \mu\text{M}$) and exhibited 190-fold more potent than the rat binding site. In 1321N1 astrocytoma cells expressing the rAde1R, 8-Aminoadenine (500 μM) inhibited isoproterenol-stimulated cAMP accumulation, which suggested that 8-Aminoadenine inhibited adenine uptake [1].

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

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Reference:

[1]. Borrmann T, Abdelrahman A, Volpini R, et al. Structure-activity relationships of adenine and deazaadenine derivatives as ligands for adenine receptors, a new purinergic receptor family. J Med Chem, 2009, 52(19): 5974-5989.

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