APNEA

Cat. No.: HY-18687

CAS No.: 89705-21-5

Molecular Formula: $C_{18}H_{22}N_6O_4$

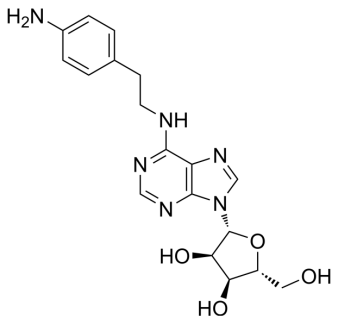
Molecular Weight: 386.41

Target: Adenosine Receptor

Pathway: GPCR/G Protein

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (646.98 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5879 mL	12.9396 mL	25.8792 mL
	5 mM	0.5176 mL	2.5879 mL	5.1758 mL
	10 mM	0.2588 mL	1.2940 mL	2.5879 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.47 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.38 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.38 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

APNEA (N6-[2-(4-Aminophenyl)ethyl]adenosine) is a potent, non-selective A3 adenosine receptor agonist.

IC_{50} & Target

Adenosine receptor[1].

In Vitro

APNEA (N6-[2-(4-Aminophenyl)ethyl]adenosine) is a non-selective agonist of the adenosine A3 receptors, at the subprotective dose of 1 mg/kg against electroconvulsions, significantly potentiates the anticonvulsive action of phenobarbital, diphenylhydantoin and valproate against maximal electroshock, being ineffective at lower doses. APNEA

	(0.0039-1 mg/kg) also enhances the protective activity of carbamazepine. APNEA at low doses potentiates the protective activity of Carbamazepine most likely through the A subtype of adenosine receptors. At higher doses, APNEA seems to enhance the anticonvulsive effect of other antiepileptics via adenosine A1 receptors[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	APNEA (N6-[2-(4-Aminophenyl)ethyl]adenosine; 2-4 mg/kg) has no significant effect on seizure parameters (seizure severity, seizure duration and afterdischarge duration) in amygdala-kindled rats. N6-[2-(4-Aminophenyl)ethyl]adenosine is combined with antiepileptic drugs administered at doses ineffective in fully kindled rats[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Borowicz KK, et al. N6-2-(4-aminophenyl)ethyl-adenosine enhances the anticonvulsive activity of antiepileptic drugs. Eur J Pharmacol. 1997 May 30;327(2-3):125-133.

[2]. Borowicz KK, et al. N(6)-2-(4-aminophenyl)ethyl-adenosine enhances the anticonvulsive action of conventional antiepileptic drugs in the kindling model of epilepsy in rats. Eur Neuropsychopharmacol. 2000 Jul;10(4):237-243.

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