

# Certificate of Analysis

**Product Name:** CGS 21680 hydrochloride

**Catalog No.:** 1063

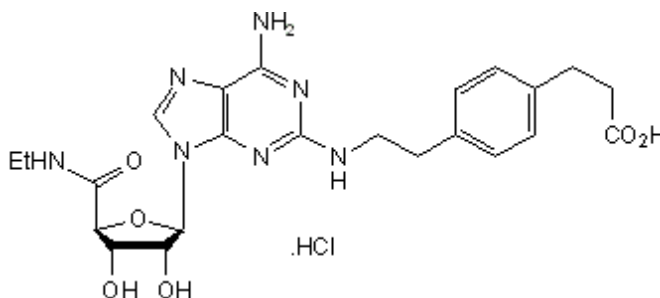
**Batch No.:** 16

**CAS Number:** 124431-80-7

**IUPAC Name:** 4-[2-[[6-Amino-9-(*N*-ethyl-β-D-ribofuranuronamidosyl)-9*H*-purin-2-yl]amino]ethyl]benzenepropanoic acid hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>23</sub>H<sub>29</sub>N<sub>7</sub>O<sub>6</sub>·HCl·¾H<sub>2</sub>O  
**Batch Molecular Weight:** 549.5  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
 2.25eq. NaOH to 100 mM  
**Storage:** Desiccate at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows >98.2% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	50.27	5.78	17.84
Found	50.31	5.57	17.83

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

A<sub>2A</sub> adenosine receptor agonist (K<sub>i</sub> = 27 nM). Has affinity for A<sub>1</sub> and A<sub>3</sub> adenosine receptors but can be used to distinguish A<sub>2A</sub>- and A<sub>2B</sub>-mediated effects.

**Physical and Chemical Properties:**

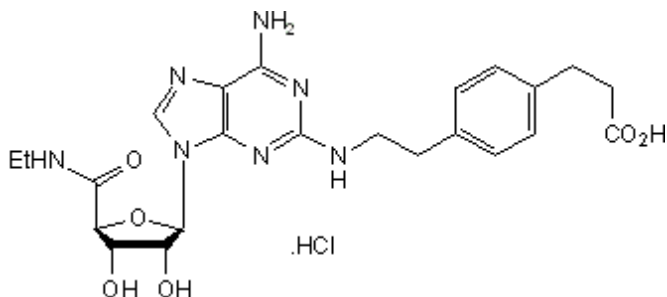
Batch Molecular Formula: C<sub>23</sub>H<sub>29</sub>N<sub>7</sub>O<sub>6</sub>.HCl.¾H<sub>2</sub>O

Batch Molecular Weight: 549.5

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Desiccate at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM  
2.25eq. NaOH to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Phillis et al** (1990) The selective adenosine A<sub>2</sub> receptor agonist, CGS 21680, is a potent depressant of cerebral cortical neuronal activity. *Brain Res.* **509** 328. PMID: 2322828.

**Nekooeian and Tabrizchi** (1998) Effects of CGS 21680, a selective A<sub>2A</sub> adenosine receptor agonist, on cardiac output and vascular resistance in acute heart failure in the anaesthetized rat. *Br.J.Pharmacol.* **123** 1666. PMID: 9605574.

**Klot** (2000) Adenosine receptors and their ligands. *Naunyn Schmiedebergs Arch.Pharmacol.* **362** 382. PMID: 11111832.

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