

Certificate of Analysis

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Product Name: PD 81723

Catalog No.: 1363

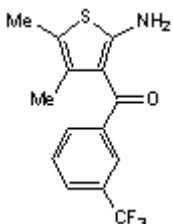
Batch No.: 2

CAS Number: 132861-87-1

IUPAC Name: (2-Amino-4,5-dimethyl-3-thienyl)-[3-(trifluoromethyl)phenyl]methanone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₂F₃NOS
Batch Molecular Weight: 299.31
Physical Appearance: Bright yellow solid
Solubility: ethanol to 100 mM
DMSO to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.75 (Dichloromethane:Methanol [1:1])
HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	56.18	4.04	4.68
Found	56.3	4.2	4.71

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

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Description:

Allosteric potentiator at the adenosine A₁ receptor; acts via agonist-dependent and -independent mechanisms. Enhances agonist affinity for, and increased t_{1/2} of dissociation from, the receptor. Also inhibits basal and forskolin-stimulated adenylyl cyclase (AC) activity in A₁ receptors expressed in CHO cells, possibly via direct potentiation of constitutive receptor activity or by direct inhibition of AC. Active in vivo.

Physical and Chemical Properties:

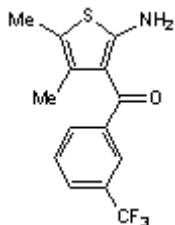
Batch Molecular Formula: C₁₄H₁₂F₃NOS

Batch Molecular Weight: 299.31

Physical Appearance: Bright yellow solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Bruns et al (1990) Structure-activity relationships for enhancement of adenosine A₁ receptor binding by 2-amino-3-benzoylthiophenes. *Mol.Pharmacol.* **38** 950. PMID: 2250667.

Mizumura et al (1996) PD 81,723, an allosteric enhancer of the A₁ adenosine receptor, lowers the threshold for ischemic preconditioning in dogs. *Circ.Res.* **79** 415. PMID: 8781475.

Kollias-Baker et al (1997) Agonist-independent effect of an allosteric enhancer of the A₁ adenosine receptor in CHO cells stably expressing the recombinant human A₁ receptor. *J.Pharmacol.Exp.Ther.* **281** 761. PMID: 9152383.

Musser et al (1999) Adenosine A₁ receptor-dependent and -independent effects of the allosteric enhancer PD 81,723. *J.Pharmacol.Exp.Ther.* **288** 446. PMID: 9918544.

Storage: Store at RT

Solubility & Usage Info:

ethanol to 100 mM

DMSO 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.

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