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TOCRIS

Print Date: Jul 24th 2024

Certificate of Analysis

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Product Name: **MRS 1754** **Catalog No.: 2752** **Batch No.: 5**

CAS Number: 264622-58-4

IUPAC Name: *N*-(4-Cyanophenyl)-2-[4-(2,3,6,7-tetrahydro-2,6-dioxo-1,3-dipropyl-1*H*-purin-8-yl)phenoxy]-acetamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{26}H_{26}N_6O_4.½H_2O$

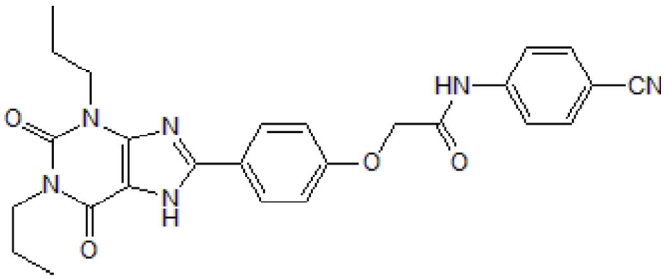
Batch Molecular Weight: 495.53

Physical Appearance: White solid

Solubility: DMSO to 5 mM with gentle warming

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.45 (Dichloromethane:Methanol [97.5:2.5])

HPLC: Shows >99% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.02	5.49	16.96
Found	62.96	5.4	16.92

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

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Description:

MRS 1754 is a selective adenosine A_{2B} receptor antagonist (K_i values are 1.97, 16.8, 403, 503, 570 and 612 nM for hA_{2B}, rA_1, hA_1, hA_{2A}, hA_3 and rA_{2A} receptors respectively).

Physical and Chemical Properties:

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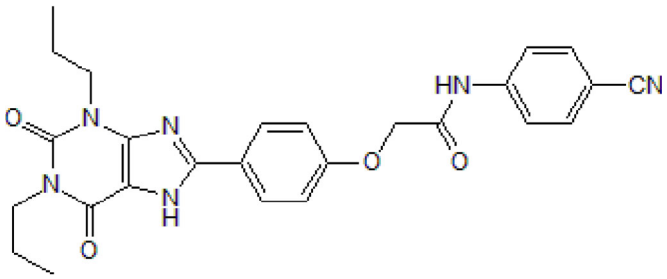
Batch Molecular Weight: 495.53

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

DMSO to 5 mM with gentle warming

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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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.

Licensing Information:

Sold with the permission of the University of Virginia Patent Foundation

References:

Nemeth *et al* (2007) Adenosine receptor activation ameliorates type I diabetes. FASEB J. ***21*** 2380.

Ji *et al* (2001) [^{3}H]MRS 1754, a selective antagonist radioligand for A_{2B} adenosine receptors. Biochem.Pharmacol. ***61*** 657. PMID: 11266650.

Kim *et al* (2000) Anilide derivatives of an 8-phenylxanthine carboxylic congener are highly potent and selective antagonists at human A_{2B} adenosine receptors. J.Med.Chem. ***43*** 1165. PMID: 10737749.