Print Date: Apr 4th 2014

Certificate of Analysis

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Product Name: VU 29 **Catalog No.: 4458** **Batch No.: 1**

CAS Number: 890764-36-0

IUPAC Name: *N*-(1,3-Diphenyl-1*H*-pyrazolo-5-yl)-4-nitrobenzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{22}H_{16}N_4O_3$

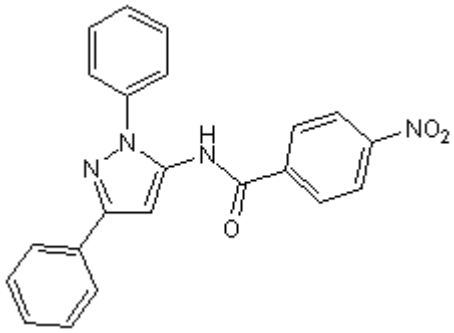
Batch Molecular Weight: 384.39

Physical Appearance: Yellow solid

Solubility: DMSO to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.52 (Dichloromethane)

HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	68.74	4.2	14.58
Found	68.42	4.19	14.53

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Description:

Potent allosteric potentiator at the rat $mGlu_5$ receptor (EC_{50} = 9 nM); binds to the MPEP (Cat. No. 1212) allosteric site ($K_{i\ app}$ = 244 nM). Selective for mGlu5 over $mGlu_1$ and $mGlu_2$ receptors (EC_{50} values are 557 nM and 1.51 µM for $mGlu_1$ and $mGlu_2$ respectively). Potentiates both DHPG-induced LTP and threshold θ-burst stimulation (TBS)-induced LTP in rat hippocampal slices. Analog of CDPPB (Cat. No. 3235).

Physical and Chemical Properties:

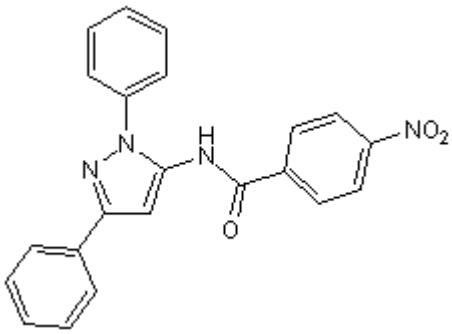
Batch Molecular Formula: $C_{22}H_{16}N_4O_3$

Batch Molecular Weight: 384.39

Physical Appearance: Yellow solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

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.

References:

de Paulis *et al* (2006) Substituent effects of *N*-(1,3-diphenyl-1*H*-pyrazol-5-yl)benzamides on positive allosteric modulation of the metabotropic glutamate-5 receptor in rat cortical astrocytes. J.Med.Chem. ***49*** 3332. PMID: 16722652.

Chen *et al* (2007) Interaction of novel positive allosteric modulators of metabotropic glutamate receptor 5 with the negative allosteric antagonist site is required for potentiation of receptor responses. Mol.Pharmacol. ***71*** 1389. PMID: 17303702.

Ayala *et al* (2009) mGluR5 positive allosteric modulators facilitate both hippocampal LTP and LTD and enhance spatial learning. Neuropsychopharmacology ***34*** 2057. PMID: 19295507.