

Certificate of Analysis

Product Name: DMNB

Catalog No.: 2088

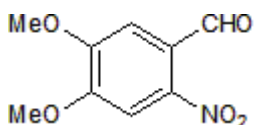
Batch No.: 1

CAS Number: 20357-25-9

IUPAC Name: 4,5-Dimethoxy-2-nitrobenzaldehyde

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉H₉NO₅
Batch Molecular Weight: 211.15
Physical Appearance: Yellow solid
Solubility: ethanol to 25 mM with gentle warming
 DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.6 (Ethyl acetate:Petroleum ether [1:2])
HPLC: Shows >98.6% purity
¹H NMR: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	51.19	4.3	6.63
Found	51.3	4.34	6.66

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

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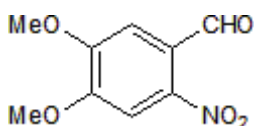
Description:

Inhibitor of DNA-dependent protein kinase (DNA-PK) ($IC_{50} = 15 \mu\text{M}$), an enzyme involved in the non-homologous end-joining (NHEJ) pathway of double-stranded DNA break (DSB) repair in human cells. Displays 100-fold higher potency than its analog vanillin and does not affect PKC activity. Produces lethal effects on cisplatin-treated D5037 cells upon continuous exposure.

Physical and Chemical Properties:Batch Molecular Formula: $C_9H_9NO_5$

Batch Molecular Weight: 211.15

Physical Appearance: Yellow solid

Minimum Purity: >98%**Batch Molecular Structure:****References:**

Durant and Karran (2003) Vanillins - a novel family of DNA-PK inhibitors. *Nucleic Acids Res.* **31** 5501. PMID: 14500812.

Storage: Store at -20°C **Solubility & Usage Info:**ethanol to 25 mM with gentle warming
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 $45-60^{\circ}\text{C}$ 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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