

Product Name: TMCB

Catalog No.: 3675

Batch No.: 1

CAS Number: 905105-89-7

IUPAC Name: 2-(4,5,6,7-Tetrabromo-2-(dimethylamino)-1*H*-benzo[d]imidazol-1-yl)acetic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₉Br₄N₃O₂.H₂O

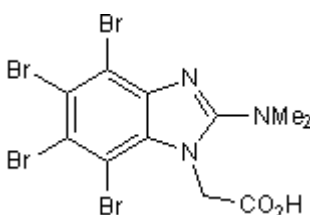
Batch Molecular Weight: 552.84

Physical Appearance: White solid

Solubility: DMSO to 25 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.2 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])

HPLC: Shows 98.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	23.9	2.01	7.6
Found	23.78	1.73	7.43

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Description:

Dual-kinase inhibitor; inhibits both casein kinase 2 (CK2) and extracellular-signal-regulated kinase 8 (ERK8) ($IC_{50} = 0.50 \mu\text{M}$ for both CK2 and ERK8). Displays selectivity for CK2 over protein kinases normally susceptible to CK2 inhibitors (K_i values are 0.25, 8.65, 11.90 and 15.25 μM for CK2, PIM1, DYRK1a and HIPK2 respectively).

Physical and Chemical Properties:

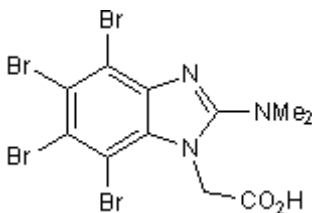
Batch Molecular Formula: $C_{11}H_9Br_4N_3O_2 \cdot H_2O$

Batch Molecular Weight: 552.84

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



References:

Pagano et al (2008) The selectivity of inhibitors of protein kinase CK2: an update. *Biochem.J.* **415** 353. PMID: 18588507.

Storage: Store at RT

Solubility & Usage Info:

DMSO to 25 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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