

**Product Name:** TBB

**Catalog No.:** 2275

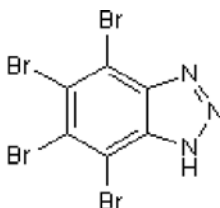
**Batch No.:** 2

CAS Number: 17374-26-4

IUPAC Name: 4,5,6,7-Tetrabromobenzotriazole

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>6</sub>HBr<sub>4</sub>N<sub>3</sub>  
**Batch Molecular Weight:** 434.71  
**Physical Appearance:** Off-white solid  
**Solubility:** DMSO to 100 mM  
ethanol to 15 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.18 (Chloroform:Methanol [9:1])  
**Melting Point:** Between 262 - 264°C  
**HPLC:** Shows 98.3% purity  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	16.58	0.23	9.67
Found	16.61	0.45	9.47

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

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**Product Name:** TBB

**Catalog No.:** 2275

**2**

CAS Number: 17374-26-4

IUPAC Name: 4,5,6,7-Tetrabromobenzotriazole

**Description:**

TBB is a cell-permeable, selective inhibitor of casein kinase-2 (CK2) ( $IC_{50}$  = 0.9 and 1.6  $\mu$ M for rat liver and human recombinant CK2 respectively). Exhibits modest discrimination between CK2 subunits, with  $K_i$  values ranging from 80 nM to 210 nM. Acts in an ATP/GTP-competitive manner and displays one to two orders of magnitude selectivity over a panel of 33 protein kinases.

**Physical and Chemical Properties:**

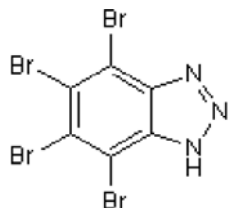
Batch Molecular Formula:  $C_6HBr_4N_3$

Batch Molecular Weight: 434.71

Physical Appearance: Off-white solid

**Minimum Purity:**  $\geq 98\%$

**Batch Molecular Structure:**



**References:**

**Zien et al** (2005) Tetrabromobenzotriazole (TBBt) and tetrabromobenzimidazole (TBBz) as selective inhibitors of protein kinase CK2: evaluation of their effects on cells and different molecular forms of human CK2. *Biochim.Biophys.Acta.* **1754** 271. PMID: 16203192.

**Pagano et al** (2004) Optimization of protein kinase CK2 inhibitors derived from 4,5,6,7-tetrabromobenzimidazole. *J.Med.Chem.* **47** 6239. PMID: 15566294.

**Sarno et al** (2001) Selectivity of 4,5,6,7-tetrabromobenzotriazole, an ATP site-directed inhibitor of protein kinase CK2 ('casein kinase-2'). *FEBS Lett.* **496** 44. PMID: 11343704.

**Storage:** Store at  $-20^{\circ}C$

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol to 15 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  $45-60^{\circ}C$  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  $-20^{\circ}C$  or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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