

TBB

Catalog No: tcsc1079



Available Sizes

Size: 10mg

Size: 50mg



Specifications

CAS No:

17374-26-4

Formula:

$C_6HBr_4N_3$

Pathway:

Stem Cell/Wnt;Cell Cycle/DNA Damage

Target:

Casein Kinase;Casein Kinase

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 430 mg/mL (989.17 mM)

Alternative Names:

NSC 231634; Casein Kinase II Inhibitor I

Observed Molecular Weight:

434.71

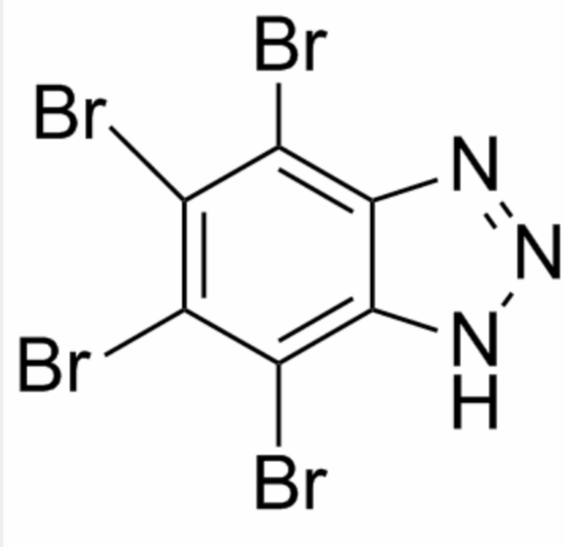
Product Description

TBB is a cell-permeable and ATP-competitive **CK2** inhibitor with an **IC₅₀** of 0.15 μ M for rat liver CK2.

IC50 & Target: IC50: 0.15 μ M (CK2), 14 μ M (CDK2)^[5]

In Vitro: Investigation of the inhibitory power of TBB with a panel of 33 protein kinases shows highest potency for CK2 (casein kinase 2) (human CK2: IC_{50} =1.6 μ M at 100 μ M ATP). TBB also inhibits three other kinases with less potency: CDK2 (IC_{50} =15.6 μ M), phosphorylase kinase (IC_{50} =8.7 μ M) and glycogen synthase kinase 3 β (GSK3 β) (IC_{50} =11.2 μ M). All other kinases tested have IC50 values 50-fold greater than that for CK2^[1]. The viability of the androgen insensitive PC-3 cells may be diminished by TBB (60 μ M TBB) acting either alone or combined with anticancer agents CPT or TRAIL when a proper time schedule of the administration is applied. The time schedule-dependent activity of TBB does not come from its effect on apoptosis in PC-3 cells^[2]. TBB is an ATP/GTP competitive inhibitor of protein kinase casein kinase-2 (CK2), has been examined against a panel of 33 protein kinases, either Ser/Thr- or Tyr-specific. In the presence of 10 μ M TBB (and 100 μ M ATP) only CK2 is drastically inhibited (>85%) whereas three kinases (phosphorylase kinase, glycogen synthase kinase 3L and cyclin-dependent kinase 2/cyclin A) underwent moderate inhibition, with IC_{50} values one-two orders of magnitude higher than CK2 (IC_{50} =0.9 μ M). TBB also inhibits endogenous CK2 in cultured Jurkat cells^[3].

In Vivo: The extent of retinal neovascularization in a mouse OIR model is reduced by approximately 60% after treatment with TBB (6 days at 60 mg/kg per day)^[4].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!