Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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 **IC_{50}** of 0.15 μM for rat liver CK2.

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IC50 & Target: IC50: 0.15 μM (CK2), 14 μM (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 μM at 100 μM ATP). TBB also inhibits three other kinases with less potency: CDK2 (IC_{50}=15.6 μM), phosphorylase kinase (IC_{50}=8.7 μM) and glycogen synthase kinase 3β (GSK3β) (IC_{50}=11.2 μM). 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 μM 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 μM TBB (and 100 μM 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 μM). 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].