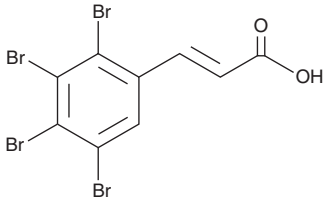
PRODUCT INFORMATION

TBCA

Item No. 14831

CAS Registry No.:	934358-00-6
Formal Name:	(2E)-3-(2,3,4,5-tetrabromophenyl)-2-propenoic acid
Synonyms:	Casein Kinase II Inhibitor III, Tetrabromocinnamic Acid
MF:	$C_9H_4Br_4O_2$
FW:	463.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 237, 278 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TBCA is supplied as a crystalline solid. A stock solution may be made by dissolving the TBCA in the solvent of choice, which should be purged with an inert gas. TBCA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of TBCA in these solvents is approximately 1, 2, and 5 mg/ml, respectively.

TBCA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TBCA should first be dissolved in DMF and then diluted with the aqueous buffer of choice. TBCA has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Casein kinase 2 (CK2) is a kinase with many targets and diverse roles in cell signaling and disease.[1,2] TBCA is a selective, cell-permeable inhibitor of CK2 (IC_{50} = 0.11 µM, K_i = 77 nM) that has minimal effect on a panel of 28 other kinases.[3] It induces cell death in Jurkat adult T cell leukemia cells (DC_{50} = 7.7 µM), driving caspase-dependent degradation of poly-ADP ribose polymerase while inhibiting CK2 activity.[3] TBCA also supports a role for CK2 in platelet function and Akt phosphorylation but not protein splicing.[4,5]

References

1. López-Ramos, M., Prudent, R., Moucadel, V., *et al.* New potent dual inhibitors of CK2 and Pim kinases: Discovery and structural insights. *FASEB J.* **24(9)**, 3171-3185 (2010).
2. Pagano, M.A., Cesaro, L., Meggio, F., *et al.* Protein kinase CK2: A newcomer in the 'druggable kinome'. *Biochem. Soc. Trans.* **34(Pt 6)**, 1303-1306 (2006).
3. Pagano, M.A., Poletto, G., Di Maira, G., *et al.* Tetrabromocinnamic acid (TBCA) and related compounds represent a new class of specific protein kinase CK2 inhibitors. *Chembiochem* **8(1)**, 129-139 (2007).
4. Ryu, S.Y. and Kim, S. Evaluation of CK2 inhibitor (E)-3-(2,3,4,5-tetrabromophenyl)acrylic acid (TBCA) in regulation of platelet function. *Eur. J. Pharmacol.* **720(1-3)**, 391-400 (2013).
5. Kim, H., Choi, K., Kang, H., *et al.* Identification of a novel function of CX-4945 as a splicing regulator. *PLoS One* **9(4)**, e94978 (2014).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM