

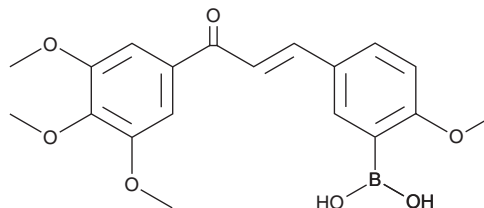
PRODUCT INFORMATION



YK-3-237

Item No. 21516

CAS Registry No.: 1215281-19-8
Formal Name: B-[2-methoxy-5-[(1E)-3-oxo-3-(3,4,5-trimethoxyphenyl)-1-propen-1-yl]phenyl]-boronic acid
MF: C₁₉H₂₁BO₇
FW: 372.2
Purity: ≥98%
UV/Vis.: λ_{max}: 224, 276, 344 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

YK-3-237 is supplied as a crystalline solid. A stock solution may be made by dissolving the YK-3-237 in the solvent of choice, which should be purged with an inert gas. YK-3-237 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of YK-3-237 in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

YK-3-237 is a chalcone derivative and an activator of sirtuin 1 (SIRT1).^{1,2} It inhibits colchicine binding to tubulin in a concentration-dependent manner and tubulin polymerization (IC₅₀ = 31 μM) and induces microtubule loss in A-10 cells (EC₅₀ = 16.5 μM).¹ YK-3-237 inhibits cell growth in a panel of leukemia, non-small cell lung, colon, CNS, melanoma, ovarian, renal, prostate, and breast cancer cell lines (GI₅₀s = <0.01-20.9 μM). It inhibits tube formation by human umbilical vein endothelial cells (HUVECs) when used at a concentration of 1 μM and inhibits functional angiogenesis in isolated rat aortic rings. YK-3-237 activates SIRT1 in a concentration-dependent manner and reduces acetylation of wild-type and mutant p53 in a SIRT1-dependent manner.² It also inhibits cell growth in panel of 9 triple-negative breast cancer (TNBC) cell lines (EC₅₀s = 0.160-5.031 μM).

References

1. Kong, Y., Wang, K., Edler, M.C., *et al.* A boronic acid chalcone analog of combretastatin A-4 as a potent anti-proliferation agent. *Bioorg. Med. Chem.* **18(2)**, 971-977 (2010).
2. Yi, Y.W., Kang, H.J., Kim, H.J., *et al.* Targeting mutant p53 by a SIRT1 activator YK-3-237 inhibits the proliferation of triple-negative breast cancer cells. *Oncotarget* **4(7)**, 984-994 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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