

Windorphen - CAS 19881-70-0 - Calbiochem A cell-permeable, selective inhibitor p300 histone acetyltransferase (IC₅₀ = 4.2 µM)

Art. ID SAF-5091640001
Unit EA
Deliverydetails No Dangerous Good /not restricted

Description

The racemic mixture of a cell-permeable (4-methoxyphenyl)chloroacrylaldehyde compound whose (Z)-isomer (isomer content 12-15%) acts as a p300-selective histone acetyltransferase (HAT) inhibitor (IC₅₀ = 4.2 µM using racemic mixture with 13% Z-isomer) and selectively disrupts β-catenin association with p300, but not CBP or LEF1/TCF4, exhibiting much reduced potency against KAT5, CBP, MYST4, MYST2 (IC₅₀ = 38.2, 51.3, 59.5, 62.2 µM, respectively) and little or no inhibitory efficacy toward GCN5 and PCAF HAT activity (IC₅₀ > 100 µM). Shown to selectively prevents human β-catenin-, mouse β-catenin-, zebrafish β-catenin-1-, but not zebrafish β-catenin-2-, mediated transcription activity without affecting β-catenin activation or nuclear translocation. Induces apoptosis in Wnt signaling-dependent cancer cultures (IC₅₀ 15 to 22 µM, 72 h) in vitro without affecting the viability of Wnt-independent H460 (up to 200 µM, 72 h) and selectively abrogates Wnt signaling in ventral β-catenin, lateral regions, but not within dorsal organizer, in 5.3 hpf epiboly stage zebrafish embryos in vivo. A great complement to the selective β-catenin-CBP interaction blocker ICG-001 (Cat. no. 504712). (E)-isomer is available separately (Cat. no. 509166) as negative control. A cell-permeable bis(4-methoxyphenyl)chloroacrylaldehyde whose (Z)-isomer (isomeric content 12-15%) acts as a p300-selective histone acetyltransferase (HAT) inhibitor (IC₅₀ = 4.2 µM) and selectively disrupts β-catenin association with p300, but not CBP or LEF1/TCF4, exhibiting much reduced potency against KAT5, CBP, MYST4, MYST2 (IC₅₀ = 38.2, 51.3, 59.5, 62.2 µM, respectively) and little or no inhibitory efficacy toward GCN5 and PCAF HAT activity (IC₅₀ > 100 µM). Shown to preferentially suppress human and mouse β-catenin-, zebrafish β-catenin-1-, but not zebrafish β-catenin-2-, mediated transcription activity in various reporter assays (20 µM) without affecting β-catenin activation or nuclear translocation. Induces apoptosis in Wnt signaling-dependent cancer cultures (IC₅₀ in SW480, RKO, DU135, and PC3, 72 h) in vitro without affecting the viability of Wnt-independent human lung cancer cell line H460 (up to 200 µM, 72 h) and selectively abrogates Wnt signaling in ventral β-catenin, lateral regions, but not within dorsal organizer, in 5.3 hpf epiboly stage zebrafish embryos in vivo, indicating that the Zebrafish β-catenin-1 and -2 regulate separate Wnt signaling events during zebrafish embryo development by associating with distinct binding partners. A great complement to the selective β-catenin-CBP interaction blocker ICG-001 (Cat. no. 504712). Pure (E)-isomer is available separately (Cat. no. xxxxxx) as a negative control.

Text/Information	Analyte/Parameter	CAS number	Concentration/Value	Unit	Method	Source
	Windorphen	[19881-70-0]				