

Product Data Sheet

Product Name: Windorphen

Cat. No.: GC12133

Chemical Properties

Cas. No. 19881-70-0

Chemical Name (E)-3-chloro-2,3-bis(4-methoxyphenyl)acrylaldehyde

SMILES O=C/C(C1=CC=C(OC)C=C1)=C(Cl)\C2=CC=C(OC)C=C2

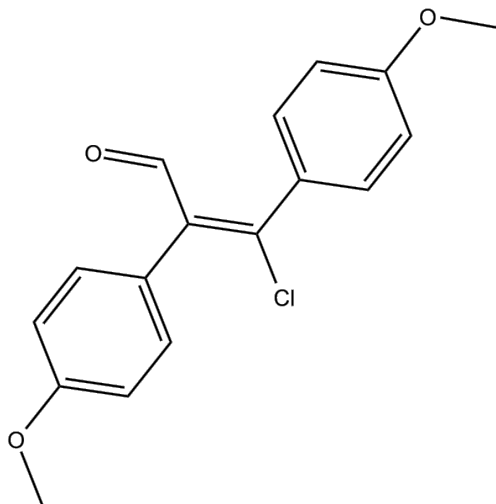
Formula $C_{17}H_{15}ClO_3$ M.Wt 302.75

Solubility $\geq 11.45\text{mg/mL}$ in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Windorphen is a Wnt inhibitor that selectively abrogates the Wnt signaling for ventral development.

Caution: Product has not been fully validated for medical applications. For research use only.

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Wnt protein is a family of signaling proteins that interacts on the Wnt/ β -Catenin pathways during embryotic development, cell proliferation, migration and adult tissue homeostasis.

In canonical Wnt/ β -catenin reporter cell line STF293, Windorphen dose-dependently inhibits Wnt3a-inducible TOPFLASH-luciferase activity (IC₅₀ of 1.5 mM). In human colon adenocarcinoma

SW480 cells with defective APC gene that constitutively activates Wnt signaling, 72 h treatment of Windorphen causes a wide spread apoptosis. [1]

In zebrafish embryos, Windorphen leads to apparent expansion of the dorsal markers (pax2.1) and marker of rhombomeres 3 and 5 at the six-somite stage (krox0). Windorphen selectively inhibits Wnt signaling in ventral and lateral regions of the 50% epiboly stage embryo (5.3 hpf). In addition, Windorphen treatment rescues the telencephalon/eye phenotype in the mbl mutant zebrafish (i.e. a defective Axin1/ β -catenin destruction complex causes abnormal activation of Wnt signaling and the loss of telencephalon and eyes.) [1]

Reference:

1. Hao J, Ao A, Zhou L et al. Selective small molecule targeting β -catenin function discovered by in vivo chemical genetic screen. Cell Rep. 2013 Sep 12;4(5):898-904.

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