SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

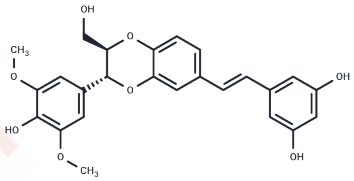
linkedin.com/company/szaboscandic

Data Sheet (Cat.No.TN7574)

TargetMol

(±)-Aiphanol

Chemical Properties



CAS No. : 578020-29-8

Formula: C25H24O8

Molecular Weight: 452.45

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	(±)-Aiphanol, a newly identified stilbenolignan analog, demonstrates notable anti-inflammatory properties by inhibiting COX-1 and COX-2. It shows a robust inhibitory effect on COX-1 (IC 50 = 1.9 μM) and a milder effect on COX-2 (IC 50 = 9.9 μM) [1]. Additionally, (±)-Aiphanol effectively inhibits VEGFR2 with an IC 50 of 0.92 μM, blocking angiogenesis and inducing apoptosis through VEGFR2 and COX2 inhibition. It is also orally active [2].
In vitro	(±)-Aiphanol, at concentrations of 7.5-30 μM over 6 hours, hinders VEGF-induced angiogenesis in HUVECs in a dose-dependent manner, notably reducing PGE2 and VEGF levels, with these effects nullified upon COX2 silencing. It surpasses Celecoxib in inhibiting VEGF-induced tubular structure formation in HUVECs [2]. In addition, (±)-Aiphanol significantly suppresses microvascular growth in the CAM assay, comparable to Bevacizumab [2]. The compound also inhibits VEGFR3/FLT4, VEGFR2/KDR, and VEGFR1/FLT1 activity while exerting moderate or weak inhibition on certain kinases in the PI3K-AKT and MAPK pathways [2]. At 30 μM over 24 hours, (±)-Aiphanol restricts HUVEC proliferation and induces apoptosis [2]. Apoptosis Analysis [2] Cell Line: HUVECs Concentration: 30 μM Incubation Time: 24 h Result: Did not alter cell cycle distribution significantly but markedly increased apoptosis, with elevated P53 and BAX protein expression.
In vivo	(±)-Aiphanol, administered orally at 30 mg/kg as a single dose, effectively inhibits tumor growth and significantly reduces tumor weight in the MC38 syngeneic mouse model [2]. This treatment enhances apoptosis in tumor tissues and decreases the phosphorylation of VEGFR2, AKT, and ERK. It also significantly reduces levels of vascular markers CD31 and factor VIII, as well as PGE2 in plasma and VEGF in tumor tissues. No changes were observed in body weight or the morphology of major organs.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2102 mL	11.0509 mL	22.1019 mL
5 mM	0.442 mL	2.2102 mL	4.4204 mL
10 mM	0.221 mL	1.1051 mL	2.2102 mL
50 mM	0.0442 mL	0.221 mL	0.442 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.