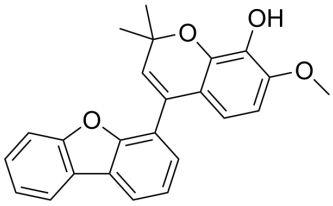
SB26019

Cat. No.:	HY-152089
CAS No.:	1233078-90-4
Molecular Formula:	$C_{24}H_{20}O_4$
Molecular Weight:	372.41
Target:	Microtubule/Tubulin
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

SB26019 is a potent anti-neuroinflammatory agent. SB26019 regulates NF-κB activation by inducing monomeric α-tubulin formation. SB26019-induced α-tubulin monomer inhibits p65 translocation[1].

In Vitro

SB26019 (10 μM; for 6 h) suppresses the production of inflammatory marker genes, such as Ccl2, Cxcl10, Il-1β, Il-6, Nos2, and Tnf[1].

SB26019 (1.25-10 μM; 1-12 h) induces IκB degradation in a time- and dose-dependent manner[1].

SB26019 (IC_{50} of 1.13 μM) produces more significant amounts of α-tubulin monomers and fewer tubulin polymers than the less potent anti-inflammatory regulator colchicine (IC_{50} of 4.20 μM)[1].

SB26019 (10 μM)-induced α-tubulin monomer inhibits p65 translocation in J774A.1 and RAW264.7 murine macrophage cells [1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

RT-PCR[1]

Cell Line:	BV-2 murine microglial cells
Concentration:	10 μM
Incubation Time:	6 h
Result:	Suppressed the production of inflammatory marker genes.

Western Blot Analysis[1]

Cell Line:	J774A.1 cells
Concentration:	1.25 μM, 2.5 μM, 5 μM, 10 μM
Incubation Time:	1 h, 3 h, 6 h, 12 h
Result:	Dose- and time-dependent IκB degradation without affecting the total amount of p65 in J774A.1 cells.

In Vivo

SB26019 (2-5 mg/kg; i.p; daily; for 4 days) ameliorates neuroinflammation in vivo[1].

Pharmacokinetic (PK) analysis of SB26019[1].

Parameters	I.P.,5 mg/kg
T_{max} (h)	0.17 ± 0.00
C_{max} (μg/mL)	1.20 ± 0.26
$T_{1/2}$ (h)	3.57 ± 0.62
AUC_t (μg h/mL)	1.77 ± 0.30
AUC_∞ (μg h/mL)	1.79 ± 0.31
CL (L/h/kg)	NA
V_{ss} (L/kg)	NA
F_t (%)	NA

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	10-week-old female C57BL/6 mice (20-25 g)[1]
Dosage:	2 mg/kg, 5 mg/kg
Administration:	i.p; daily; for 4 days
Result:	Suppressed microglial activation by downregulating lba-1 and proinflammatory cytokines.

REFERENCES

[1]. Junhyeong Yim, et al. Phenotype-based screening rediscovered benzopyran-embedded microtubule inhibitors as anti-neuroinflammatory agents by modulating the tubulin-p65 interaction. Exp Mol Med. 2022 Dec 12;1-10.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA