STAT3/AKT-IN-1

Cat. No.: HY-161351

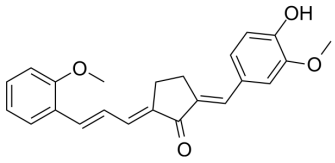
Molecular Formula: $C_{23}H_{22}O_4$

Molecular Weight: 362.42

Target: Akt; STAT; Apoptosis

Pathway: PI3K/Akt/mTOR; JAK/STAT Signaling; Stem Cell/Wnt; Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

STAT3/AKT-IN-1 is a dual inhibitor for the signal transducer and activator of transcription 3 (STAT3) and protein kinase B (AKT) signalling pathway, exhibits antitumor activity against gastric cancer and induces cell apoptosis in SGC-7901 cells[1].

IC_{50} & Target

Stat-3

In Vitro

STAT3/AKT-IN-1 inihibits cell viability of gastric cancer cells SGC-7901 and BGC-823 with IC_{50}s of 1.39 μM and 2.92 μM, respectively[1].

STAT3/AKT-IN-1 (2.5-10 μM) inhibits proliferation and migration, induces apoptosis by triggering cell cycle arrest at G2/M phase in SGC-7901 in a dose-dependent manner[1].Migration assay[1]

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

Cell Migration Assay [1]

Cell Line:	SGC-7901
Concentration:	2.5-10 μM
Incubation Time:	48 h
Result:	Inhibited migration of SGC-7901 cells.

Cell Cycle Analysis[1]

Cell Line:	SGC-7901
Concentration:	2.5-10 μM
Incubation Time:	48 h
Result:	Arrested cell cycle at G2/M phase.

Western Blot Analysis[1]

Cell Line:	SGC-7901
Concentration:	2.5-10 μM

Incubation Time:	18 h
Result:	Inhibited phosphorylation of AKT (Ser473) and STAT3 (Tyr705).

In Vivo

STAT3/AKT-IN-1 (15 mg/kg, i.p., daily for 20 days) exhibits anticancer activity without significant toxicity in SGC-7901 xenografted BALB/c mice[1].

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

Animal Model:	SGC-7901 xenografted BALB/c mice[1]
Dosage:	15 mg/kg
Administration:	i.p. once daily for 20 days
Result:	Inhibited tumor growth without weight loss.

REFERENCES

[1]. Gan X, et al., Design, synthesis, and evaluation of cyclic C7-bridged monocarbonyl curcumin analogs containing an o-methoxy phenyl group as potential agents against gastric cancer. J Enzyme Inhib Med Chem. 2024 Dec;39(1):2314233.

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