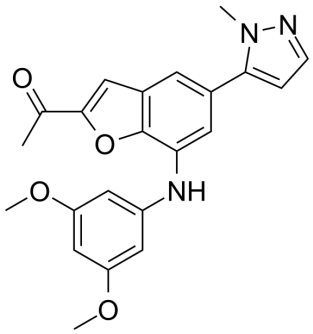
STAT3-IN-9

Cat. No.:	HY-146666
Molecular Formula:	$C_{22}H_{21}N_3O_4$
Molecular Weight:	391.42
Target:	Apoptosis; STAT
Pathway:	Apoptosis; JAK/STAT Signaling; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	STAT3-IN-9 is a potent STAT3 inhibitor. STAT3-IN-9 inhibits the activation of STAT3 (Tyr705) without influencing the phosphorylation of STAT1 (Tyr701). STAT3-IN-9 induces apoptosis and cell cycle arrest at the G2/M phase[1].
IC_{50} & Target	STAT3

In Vitro

STAT3-IN-9 (compound C6) (48 h) shows potent in vitro anti-tumor activity with IC_{50}s of 0.16, 5.80, 1.63, 5.73, >25, >25 μM for MDA-MB-468, MDA-MB-231, HepG2, A549, U251, HCT116 cells, respectively[1].

STAT3-IN-9 (0, 0.2, 1.0, 5.0 μM; 24 h) inhibits the activation of STAT3 (Tyr705) without influencing the phosphorylation of STAT1 (Tyr701)[1].

STAT3-IN-9 (0, 0.2, 1 μM; 24 h) induces apoptosis through the mitochondrial Caspase dependent apoptotic pathway[1].

STAT3-IN-9 (0, 0.2, 1 μM; 24 h) induces cell cycle arrest at the G2/M phase in a dose-dependent manner[1].

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

Cell Proliferation Assay[1]

Cell Line:	MDA-MB-468, MDA-MB-231, HepG2, A549, U251, HCT116 cells
Concentration:	
Incubation Time:	48 h
Result:	Showed potent in vitro anti-tumor activity with IC_{50}s of 0.16, 5.80, 1.63, 5.73, >25, >25 μM for MDA-MB-468, MDA-MB-231, HepG2, A549, U251, HCT116 cells, respectively.

Western Blot Analysis[1]

Cell Line:	MDA-MB-468 cells
Concentration:	0, 0.2, 1.0, 5.0 μM
Incubation Time:	24 h
Result:	Inhibited the activation of STAT3 (Tyr705) without influencing the phosphorylation of STAT1 (Tyr701).

Apoptosis Analysis[1]

Cell Line:	MDA-MB-468 cells
Concentration:	0, 0.2, 1 μM
Incubation Time:	24 h
Result:	Induced apoptosis through the mitochondrial Caspase dependent apoptotic pathway.

Cell Cycle Analysis[1]

Cell Line:	MDA-MB-468 cells
Concentration:	0, 0.2, 1 μM
Incubation Time:	24 h
Result:	Cells were arrest at the G2/M phase in a dose-dependent manner.

REFERENCES

[1]. Wang F, et al. Identification of novel STAT3 inhibitors bearing 2-acetyl-7-phenylamino benzofuran scaffold for antitumour study. Bioorg Med Chem. 2020; 28(24):115822.

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