STAT3-IN-14

Cat. No.: HY-N10472

CAS No.: 123297-90-5

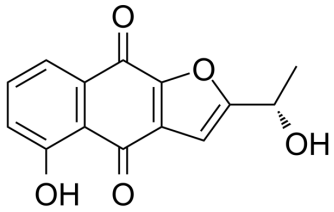
Molecular Formula: $C_{14}H_{10}O_5$

Molecular Weight: 258.23

Target: STAT

Pathway: 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-14 (Compound 1) is a STAT3 inhibitor and has STAT3 phosphorylation inhibitory activity. STAT3-IN-14 (Compound 1) can directly bind to the hinge region of STAT3[1].
IC_{50} & Target	IC50: 0.42 μM (MDA-MB-231); 0.50 μM (MCF7); 0.13 μM (A549) [1]
In Vitro	STAT3-IN-14 (Compound 1) shows inhibitory activity against phosphor-STAT3. STAT3-IN-14 (Compound 1) reduces the phosphorylation inhibitory activity against MDA-MB-231 cells (JAK/STAT pathway constitutively active) in does dependent manner, but no inhibitory activities against JAK kinases. STAT3-IN-14 (Compound 1) has growth inhibitory activity with with IC_{50} values of 0.42 μM, 0.50 μM and 0.13 μM in MDA-MB-231, MCF7 and A549cells, respectively[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	MCF7 cells; MDA-MB-231 cells
Concentration:	1 or 10 μM; 0.5, 1, 2, 4 μM
Incubation Time:	1 h; 2 h
Result:	Completely inhibited STAT3 phosphorylation at 10 μM, and partial inhibition at 1 μM. Reduced the phosphorylation of STAT3 in does dependent manner.

Cell Proliferation Assay[1]

Cell Line:	MDA-MB-231, MCF7 and A549 cells
Concentration:	0-30 μM
Incubation Time:	72 h
Result:	Showed moderate to strong growth inhibitory activity among the three cancer cell lines.

REFERENCES

[1]. Teruyuki Tahara, et al. STAT3 inhibitory activity of naphthoquinones isolated from Tabebuia avellanedae. Bioorg Med Chem. 2020 Mar 15;28(6):115347.

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