Data Sheet (Cat.No.T206458)

TargetMol

HSND80

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	HSND80 (Compound 1) is an orally active MNK/p70S6K inhibitor, exhibiting a Kd value of 44 nM for MNK1 and 4 nM for MNK2. The residence time of HSND80 on MNK1 and MNK2 is 45 minutes and 58 minutes, respectively. HSND80 effectively inhibits non-small cell lung cancer (NSCLC) both in vitro and in vivo, and suppresses the growth of triple-negative breast cancer (TNBC) cells in vitro.
Targets(IC50)	MNK,S6 Kinase
In vitro	HSND80 inhibits the growth of various cell lines, including MDA-MB-231, MDA-MB-468, 4T1, T47D, MCF-7, HOP-92, NCI-H226, NCI-H522, EKVX, NCI-H322M, A549, NCI-H23, NCI-H460, HOP-62, and KLN205, with IC50 values of 8.8 nM, 18.3 nM, 0.93 nM, 84.2 nM, 18.5 nM, 27 nM, 29.5 nM, 31.6 nM, 38 nM, 57.5 nM, 79.4 nM, 107.2 nM, and 144.5 nM respectively, over a 72-hour period at concentrations ranging from 0.1 to 10 nM. Additionally, at 200 nM for 30 hours, HSND80 induces G1 phase arrest in MDA-MB-231 cells. Moreover, exposure to HSND80 at 0.5-3 μM for 4 hours results in the downregulation of phosphorylation levels of eIF4E (a MNK1/2 target) as well as S6 and eIF4B (targets of p70S6K) in MDA-MB-231 cells.
In vivo	HSND80 (10 mg/kg; oral administration) enhances oral bioavailability, with its peak plasma concentration in male CD1 mice reaching 176 ng/mL at 2 hours and decreasing to 2.5 ng/mL at 24 hours. Administering HSND80 (15 mg/kg; 30 mg/kg; orally; for 5 days, then paused for 2 days, over a 15-day period) reduces tumor volume in DBA/2 mice.

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