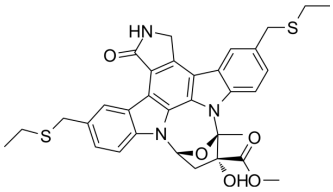
CEP-1347

Cat. No.:	HY-10412
CAS No.:	156177-65-0
Molecular Formula:	$C_{33}H_{33}N_3O_5S_2$
Molecular Weight:	615.76
Target:	JNK; Mixed Lineage Kinase; MDM-2/p53
Pathway:	MAPK/ERK Pathway; Apoptosis
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	CEP-1347 is an inhibitor of the JNK/SAPK pathway with neuroprotective effects. CEP-1347 blocks JNK1 activation induced by members of the mixed lineage kinase (MLK) family (MLK3, MLK2, MLK1, dual leucine zipper kinase, and leucine zipper kinase). As an inhibitor of MDM4, CEP-1347 can more effectively inhibit the growth of glioma cells expressing wild-type p53[1][2][3][4][5][6].
IC_{50} & Target	JNK1
In Vitro	CEP-1347 (0-500 nM; 3 days) decreases the expression of MDM4 and activates the p53 pathway in malignant meningioma cells with wild-type p53[4]. CEP-1347 (KT7515) promotes motor neuron survival by inhibiting JNK1 activity in rat embryonic motor neurons deficient in nutritional factors. The IC_{50} values of CP-1347 for JNK1 activation and EC_{50} values of motor neuron survival are both 20 nM [5]. CEP-1347 (0.2-20 μM; 2 h) dose-dependently inhibits pancresin-induced JNK activation in isolated pancreatic acinus, and is almost completely effective at a concentration of 2 μM[6]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	CEP-1347 (0-60 mg/kg; Subcutaneous injection (s.c.)) in rats treated with Caerulein (HY-A0190) (10 μg/kg; Intravenous injection (i.v.)) can dose-dependent inhibit Caerulein Induced JNK activation and improve pancreatitis induced by pancreatin[6]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	male white Sprague-Dawley rats[6]
Dosage:	Caerulein (HY-A0190): 10 μg/kg; CEP-1347: 0-60 mg/kg
Administration:	Caerulein: Intravenous injection (i.v.); CEP-1347: Subcutaneous injection (s.c.)
Result:	Caerulein-induced JNK activation was dose-dependent inhibited.

REFERENCES

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[3]. Maroney AC, Finn JP, Connors TJ, et al. Cep-1347 (KT7515), a semisynthetic inhibitor of the mixed lineage kinase family. J Biol Chem. 2001;276(27):25302-25308.

[4]. Maroney AC, et al. Motoneuron apoptosis is blocked by CEP-1347 (KT 7515), a novel inhibitor of the JNK signaling pathway. J Neurosci. 1998;18(1):104-111.

[5]. Wagner AC, et al. EP-1347 inhibits caerulein-induced rat pancreatic JNK activation and ameliorates caerulein pancreatitis. Am J Physiol Gastrointest Liver Physiol. 2000;278(1):G165-G172.

[6]. Saporito MS, Hudkins RL, Maroney AC. Discovery of CEP-1347/KT-7515, an inhibitor of the JNK/SAPK pathway for the treatment of neurodegenerative diseases. Prog Med Chem. 2002;40:23-62.

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