

XST-14

Chemical Properties

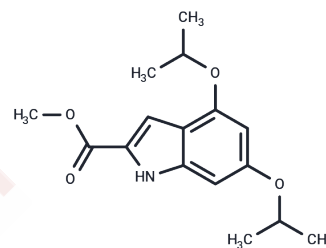
CAS No. : 2607143-50-8

Formula: C₁₆H₂₁NO₄

Molecular Weight: 291.34

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	XST-14 is a competitive and specific inhibitor of ULK1 (IC ₅₀ : 26.6 nM). XST-14 blocks autophagy by inhibiting the phosphorylation of ULK1 downstream substrates. XST-14 induces apoptosis and inhibits the growth of HCC cells.
Targets(IC ₅₀)	CaMK, Apoptosis, ALK, Autophagy, p38 MAPK, TGF-beta/Smad
In vitro	Treatment of HepG2 cells with XST-14 (5 μM) alone or in combination with sorafenib (5 μM) for 24 hours showed a synergistic effect, indicating that XST-14 in combination with sorafenib can inhibit HCC in vitro[1].
In vivo	BALB/c mice were treated with XST-14 (30 mg/kg, IP, every other day), sorafenib (30 mg/kg, P.O), or a combination of sorafenib (30 mg/kg, P.O) and XST-14 (30 mg/kg, IP) for 2 weeks. The results indicate that XST-14 exhibits favorable drug metabolism and pharmacokinetic (DMPK) properties, with no significant toxicity observed on liver/kidney function or body weight.

Solubility Information

Solubility	DMSO: 80 mg/mL (274.59 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4324 mL	17.1621 mL	34.3242 mL
5 mM	0.6865 mL	3.4324 mL	6.8648 mL
10 mM	0.3432 mL	1.7162 mL	3.4324 mL
50 mM	0.0686 mL	0.3432 mL	0.6865 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Si-Tu Xue, et al. The role of the key autophagy kinase ULK1 in hepatocellular carcinoma and its validation as a treatment target . *Autophagy*. 2020 Oct;16(10):1823-1837.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481