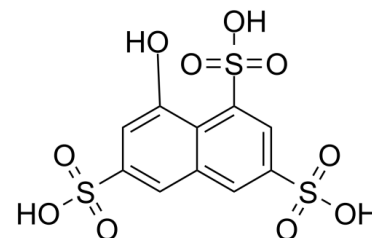


Data Sheet

Product Name:	ζ-Stat
Cat. No.:	CS-0088118
CAS No.:	3316-02-7
Molecular Formula:	C ₁₀ H ₈ O ₁₀ S ₃
Molecular Weight:	384.36
Target:	Apoptosis; PKC
Pathway:	Apoptosis; Epigenetics; TGF-beta/Smad
Solubility:	H ₂ O : 62.5 mg/mL (162.61 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

ζ-Stat (NSC37044) is a specific and atypical **PKC-ζ** inhibitor, with an **IC₅₀** of 5 μM. ζ-Stat can reduce melanoma cell lines proliferation and induce apoptosis, and has antitumor activity in vitro^{[1][2]}. IC₅₀ & Target: IC₅₀: 5 μM (PKC-ζ)^[1] **In Vitro:** ζ-Stat (0.1-20 μM) shows only 13% inhibition on PKC-ι at 20 μM, but shows a significant inhibition on PKC-ζ as 51% at 5 μM level^[1].

ζ-Stat (0.1-10 μM; 3 d) significantly decreases cell proliferation of SK-MEL-2 and MeWo upon increasing the concentrations^[1].

ζ-Stat (7 or 10 μM; 24-72 h) and 5-FU in combination is able to decrease the viability of LoVo CRC cells by more than 75%^[2].

ζ-Stat (5 μM; 3 d) shows a significant diminution of phosphorylated, total PKC-ζ, Bcl-2 and PARP levels, and increases Caspase-3 and cleaved-PARP levels in SK-MEL-2 and MeWo cells^[1].

ζ-Stat (5 μM; 1-10 h) does not show significant cytotoxicity on MEL-F-NEO, SK-MEL-2 and MeWo cells^[1].

References:

[1]. Ratnayake WS, et, al. Oncogenic PKC-ι activates Vimentin during epithelial-mesenchymal transition in melanoma; a study based on PKC-ι and PKC-ζ specific inhibitors. Cell Adh Migr. 2018; 12(5):447-463.

[2]. Islam SMA, et, al. Atypical Protein Kinase-C inhibitors exhibit a synergistic effect in facilitating DNA damaging effect of 5-fluorouracil in colorectal cancer cells. Biomed Pharmacother. 2020 Jan; 121:109665.

CAIndexNames:

1,3,6-Naphthalenetrisulfonic acid, 8-hydroxy-

SMILES:

O=S(C1=C2C(O)=CC(S(=O)(O)=O)=CC2=CC(S(=O)(O)=O)=C1)(O)=O

Caution: Product has not been fully validated for medical applications. For research use only.

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