

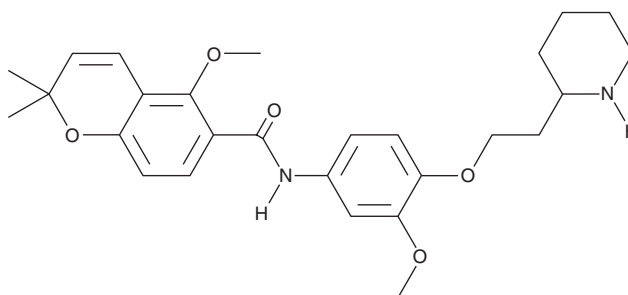
PRODUCT INFORMATION



NCT-58

Item No. 38325

CAS Registry No.: 2411429-33-7
Formal Name: 5-methoxy-N-[3-methoxy-4-[2-(2-piperidinyl)ethoxy]phenyl]-2,2-dimethyl-2H-1-benzopyran-6-carboxamide
MF: C₂₇H₃₄N₂O₅
FW: 466.6
Purity: ≥98%
UV/Vis.: λ_{max}: 241, 289 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NCT-58 is supplied as a solid. A stock solution may be made by dissolving the NCT-58 in the solvent of choice, which should be purged with an inert gas. NCT-58 is soluble in the organic solvent dimethyl formamide at a concentration of approximately 1 mg/ml.

Description

NCT-58 is an inhibitor of heat shock protein 90 (Hsp90).^{1,2} It binds to the C-terminal domain of Hsp90α and inhibits the protein-protein interaction between the Hsp90α C-terminal domain and peptidylprolyl isomerase D (PPID), a co-chaperone. It decreases cell viability and induces apoptosis in HER2-positive BT474 and SK-BR-3 human breast cancer cells when used at concentrations ranging from 0.5 to 20 μM.¹ NCT-58 (10 μM) reduces mammosphere formation by, as well as heat shock factor 1 (Hsf1), Hsp70, and Hsp90 protein levels in, BT474 cells. It also reduces intratumoral levels of HER2 and the intracellular domain of HER2 (ICD-HER2), as well as reduces tumor growth and angiogenesis, in a trastuzumab-resistant JIMT-1 breast cancer mouse xenograft model when administered at a concentration of 30 mg/kg.

References

1. Park, S., Kim, Y.-J., Park, J.M., *et al.* The C-terminal HSP90 inhibitor NCT-58 kills trastuzumab-resistant breast cancer stem-like cells. *Cell Death Discov.* **7**(1), 354 (2021).
2. Nguyen, C.-T., Ann, J., Sahu, R., *et al.* Discovery of novel anti-breast cancer agents derived from deguelin as inhibitors of heat shock protein 90 (HSP90). *Bioorg. Med. Chem. Lett.* **30**(17), 127374 (2020).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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