

PRODUCT INFORMATION



Eeyarestatin 1

Item No. 10012609

CAS Registry No.: 412960-54-4
Formal Name: 3-(4-chlorophenyl)-4-[[[(4-chlorophenyl)amino]carbonyl]hydroxyamino]-5,5-dimethyl-2-oxo-1-imidazolidineacetic acid 2-[3-(5-nitro-2-furanyl)-2-propen-1-ylidene]hydrazide

MF: C₂₇H₂₅Cl₂N₇O₇

FW: 630.4

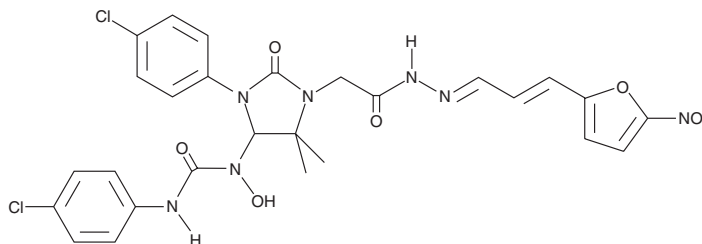
Purity: ≥98%

UV/Vis.: λ_{max}: 245, 285, 380 nm

Supplied as: A crystalline 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

Eeyarestatin 1 is supplied as a crystalline solid. A stock solution may be made by dissolving the eeyarestatin 1 in the solvent of choice, which should be purged with an inert gas. Eeyarestatin 1 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of eeyarestatin 1 in these solvents is approximately 30 mg/ml.

Description

Terminally misfolded proteins, recognized by chaperones on the endoplasmic reticulum (ER), are transported to depots for ubiquitination and proteasomal degradation by the ER-associated protein degradation (ERAD) pathway. Eeyarestatin 1 is an inhibitor of the ERAD pathway, blocking the degradation of misfolded proteins at a dose of 8 μM.¹ It associates with the p97-associated deubiquitinating complex in cells, preventing deubiquitination of substrates by ataxin-3.^{2,3} Eeyarestatin 1, at 4 μM, interferes with both retrograde and anterograde trafficking of proteins, including certain toxins, and potentially, viruses.⁴

References

1. Fiebigler, E., Hirsch, C., Vyas, J.M., *et al.* Dissection of the dislocation pathway for type I membrane proteins with a new small molecule inhibitor, eeyarestatin. *Mol. Biol. Cell* **15(4)**, 1635-1646 (2004).
2. Wang, Q., Li, L., and Ye, Y. Inhibition of p97-dependent protein degradation by Eeyarestatin I. *J. Biol. Chem.* **283(12)**, 7445-7454 (2008).
3. Wang, Q., Shinkre, B.A., Lee, J.G., *et al.* The ERAD inhibitor Eeyarestatin I is a bifunctional compound with a membrane-binding domain and a p97/VCP inhibitory group. *PLoS One* **5(11)**, 1-12 (2010).
4. Aletrari, M.O., McKibbin, C., Williams, H., *et al.* Eeyarestatin 1 interferes with both retrograde and anterograde intracellular trafficking pathways. *PLoS One* **6(7)**, 1-11 (2011).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 04/08/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM