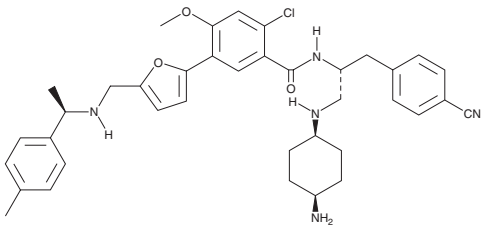
PRODUCT INFORMATION

BAY-850

Item No. 23422

CAS Registry No.: 2099142-76-2
Formal Name: N-[(1R)-2-[(*cis*-4-aminocyclohexyl)amino]-1-[(4-cyanophenyl)methyl]ethyl]-2-chloro-4-methoxy-5-[5-[[[(1R)-1-(4-methylphenyl)ethyl]amino]methyl]-2-furanyl]-benzamide
MF: $C_{38}H_{44}ClN_5O_3$
FW: 654.2
Purity: ≥98%
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

BAY-850 is supplied as a solid. A stock solution may be made by dissolving the BAY-850 in the solvent of choice, which should be purged with an inert gas. BAY-850 is slightly soluble in acetonitrile (0.1-1 mg/ml) and sparingly soluble in DMSO (1-10 mg/ml).

Description

BAY-850 is an inhibitor of the ATPase family AAA domain-containing protein 2 (ATAD2; IC_{50} = 22 nM in a time-resolved FRET assay using a tetra-acetylated histone H4 peptide).[1] It is selective for ATAD2 over a panel of 32 bromodomain family proteins, including ATAD2B, a panel of 354 kinases, and a panel of 25 G protein-coupled receptors (GPCRs) at 1 µM. BAY-850 induces dimerization of ATAD2 in a concentration-dependent manner in a cell-free assay and inhibits the ATAD2-chromatin interaction in MCF-7 breast cancer cells in a fluorescence recovery after photobleaching (FRAP) assay. It induces apoptosis and cell cycle arrest in, and inhibits proliferation, invasion, and migration of, PA-1 and SKOV3 ovarian cancer cells when used at a concentration of 5 µM.[2] BAY-850 (20 mg/kg) reduces tumor volume and the percentage of lung metastases in a SKOV3 mouse xenograft model. See the Structural Genomics Consortium (SGC) website for more information.

References

1. Fernández-Montalván, A.E., Berger, M., Kuropka, B., *et al*. Isoform-selective ATAD2 chemical probe with novel chemical structure and unusual mode of action. *ACS Chem. Biol.* **12(11)**, 2730-2736 (2017).
2. Guruvaiah, P., Chava, S., Sun, C.W., *et al*. ATAD2 is a driver and a therapeutic target in ovarian cancer that functions by upregulating CENPE. *Cell Death Dis.* **14(7)**, 456 (2023).

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