

PRODUCT INFORMATION



BC13

Item No. 42704

CAS Registry No.: 3036645-03-8

Formal Name: 8-cyclopentyl-2-[2-[4-(3,4-dihydro-5,7-dimethoxy-4-oxo-2-quinazolinyl)benzoyl]-2,7-diazaspiro[3.5]non-7-yl]-5-methylpyrido[2,3-d]pyrimidin-7(8H)-one

MF: $C_{37}H_{39}N_7O_5$

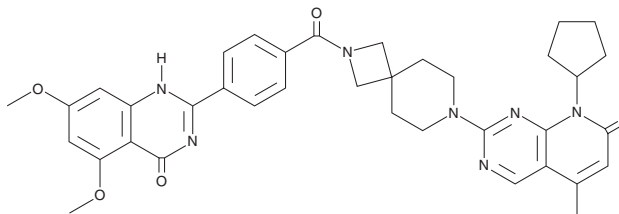
FW: 661.8

Purity: $\geq 98\%$

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

BC13 is supplied as a crystalline solid. A stock solution may be made by dissolving the BC13 in the solvent of choice, which should be purged with an inert gas. BC13 is sparingly soluble (1-10 mg/ml) in chloroform.

Description

BC13 is a dual inhibitor of cyclin-dependent kinase 6 (Cdk6) and bromodomain-containing protein 4 (BRD4; IC_{50} s = 36.03, 234.12, and 137.42 nM for Cdk6 and BRD4 bromodomain 1 (BD1) and BD2, respectively).¹ It is selective for Cdk6 over Cdk1-Cdk5 at 500 nM and for BD1 and BD2 in BRD4 over those in BRD2 and BRD3 (IC_{50} s = >1,000, >1,000, 863.41, and 967.5 nM, respectively). It inhibits the proliferation of MDA-MB-231 and BT-549 triple-negative breast cancer (TNBC) cells (IC_{50} s = 2,250 and 980 nM, respectively) but not non-cancerous MCF-10A cells (IC_{50} = >16.1 μM). BC13 (2 μM) in combination with the ferroptosis inducer RSL3 (Item No. 19288) synergistically reduces colony formation of MDA-MB-231 cells. It also reduces tumor growth in an MDA-MB-231 mouse xenograft model when administered at a dose of 25 mg/kg every other day.

Reference

1. Zhang, Y., Zheng, L., Ma, L., *et al.* Discovery of dual CDK6/BRD4 inhibitor inducing apoptosis and increasing the sensitivity of ferroptosis in triple-negative breast cancer. *J. Med. Chem.* **67**(23), 21186-21207 (2024).

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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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