

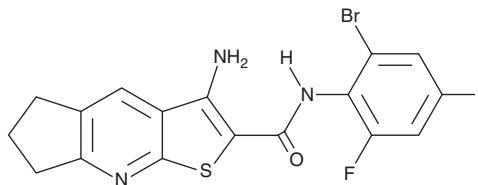
# PRODUCT INFORMATION



## DC\_AC50

Item No. 19283

**CAS Registry No.:** 497061-48-0  
**Formal Name:** 3-amino-N-(2-bromo-4,6-difluorophenyl)-6,7-dihydro-5H-cyclopenta[b]thieno[3,2-e]pyridine-2-carboxamide  
**MF:** C<sub>17</sub>H<sub>12</sub>BrF<sub>2</sub>N<sub>3</sub>OS  
**FW:** 424.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 294 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

DC\_AC50 is supplied as a crystalline solid. A stock solution may be made by dissolving the DC\_AC50 in the solvent of choice, which should be purged with an inert gas. DC\_AC50 is soluble in the organic solvent DMSO at a concentration of approximately 10 mg/ml.

### Description

DC\_AC50 is an inhibitor of the copper-trafficking proteins Atox1 and CCS.<sup>1</sup> It binds to purified Atox1 and CCS (K<sub>d</sub>s = 6.8 and 8.2 μM, respectively) and inhibits the interaction between Atox1 and domain 4 of the Cu<sup>+</sup>-ATPase ATP7B in the presence of zinc in a FRET-based assay when used at a concentration of 100 μM. DC\_AC50 increases copper and reactive oxygen species (ROS) levels and decreases COX activity and lipid biosynthesis in H1299 cells when used at a concentration of 10 μM. It inhibits the proliferation of H1299, K562, MDA-MB-231, and 212LN cancer cells, but not PIG1, HDF, HaCaT, or MCF-10A cells, in a concentration-dependent manner. DC\_AC50 (100 mg/kg per day) reduces tumor growth in an H1299 mouse xenograft model.

### Reference

1. Wang, J., Luo, C., Shan, C., *et al.* Inhibition of human copper trafficking by a small molecule significantly attenuates cancer cell proliferation. *Nat. Chem.* **7**(12), 968-979 (2015).

#### 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

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