

## Catalog # 10-1636 NAcM-OPT

1-Benzyl-1-(1-butylpiperidin-4-yl)-3-(3,4-dichlorophenyl)urea Lot # S104075

A potent and selective NEDD8 ligation inhibitor,  $IC_{50}$ =80 nM (*in vitro*).<sup>1</sup> It inhibits the N-terminal acetyl-dependent interaction between the E2 conjugating enzyme UBE2M/UBC12 and DCN1, a subunit of a multiprotein E3 ligase for the ubiquitin-like protein NEDD8, an interaction which is essential for assembly of the multiprotein ligation complex.<sup>2</sup> NAcM-OPT inhibits NEDD8 ligation *in vitro* and in cells ( $IC_{50}$ =10  $\mu$ M) and suppresses anchorage-independent growth of HCC95 cells and is highly selective with respect to other N-terminal acetyl protein binding sites.<sup>1</sup>

- 1) Scott et al. (2017), Blocking an N-terminal acetylation-dependent protein interaction inhibits an E3 ligase; Nat. Chem. Biol., **13** 850
- 2) Scott et al. (2011), N-terminal acetylation acts as an avidity enhancer within an interconnected multiprotein complex; Science, **334** 674

## **PHYSICAL DATA**

Molecular Weight: 434.40

Molecular Formula: C<sub>23</sub>H<sub>29</sub>Cl<sub>2</sub>N<sub>3</sub> O
Purity: 98% by HPLC/TLC

NMR: (Conforms)

Solubility: DMSO (up to 30 mg/ml) or Ethanol (up to 20 mg/ml)

Physical Description: White solid

Storage and Stability: Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in

DMSO or ethanol may be stored at -20°C for up to 3 months.

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