

---

## Product Data Sheet

---

Product Name: DC-U4106

Cat. No.: GC67886

### Chemical Properties

Cas. No. 2410534-62-0

Formula  $C_{29}H_{27}N_5O_5$  M.Wt 525.56

Solubility Storage Store at  $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at  $37^{\circ}C$  and shake it in the ultrasonic bath for a while. Stock solution can be stored below  $-20^{\circ}C$  for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure

### Background

DC-U4106 is a **USP8** targeting inhibitor with the **K<sub>d</sub>** value of  $4.7 \mu M$  and the **IC<sub>50</sub>** value of  $1.2 \mu M$ . DC-U4106 can target the ubiquitin pathway and facilitate the degradation of **ER $\alpha$** . DC-U4106 inhibits tumor growth with minimal toxicity and has the potential for the research of breast cancer<sup>[1]</sup>.

DC-U4106 ( $1.2-45.2 \mu M$ ) inhibits USP8 and USP2 with the IC<sub>50</sub> values of  $1.2 \mu M$  and  $58.4 \mu M$ , respectively, and no activity in USP7<sup>[1]</sup>.

DC-U4106 ( $0-7 \mu M$ , 24 hours) reduces mRNA levels of ER $\alpha$  and PR<sup>[1]</sup>.

DC-U4106 ( $0-5 \mu M$ , 24 hours) can regulate the RTK pathway related proteins and the expression of ER $\alpha$  and PR proteins<sup>[1]</sup>.

DC-U4106 ( $0-5 \mu M$ , 12 hours) can induce apoptosis and inhibit cell proliferation<sup>[1]</sup>.

Western Blot Analysis<sup>[1]</sup>

Cell Line: USP8-positive cell line MCF-7

Concentration:  $0-5 \mu M$

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

---

**Product Data Sheet**

---

Incubation  
Time: 24 hours

Result: Reduced the expression of EGFR, ErbB2, and ErbB3 proteins with increasing concentrations and caused degradation of ER $\alpha$  and PR proteins.

**RT-PCR<sup>[1]</sup>**

Cell Line: USP8-positive cell line MCF-7

Concentration: 0-7  $\mu$ M

Incubation  
Time: 24 hours

Result: Reduced mRNA levels of ER $\alpha$  and PR.

**Cell Proliferation Assay<sup>[1]</sup>**

Cell Line: USP8-positive cell line MCF-7

Concentration: 0-5  $\mu$ M

Incubation  
Time:

Result: Inhibited cell growth in a dose-dependent manner.

**Apoptosis Analysis<sup>[1]</sup>**

Cell Line: USP8-positive cell line MCF-7

Concentration: 0-5  $\mu$ M

Incubation  
Time: 12 hours

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

---

## Product Data Sheet

---

Result: Resulted in increasing in the proportion of apoptotic cells with increasing concentrations.

DC-U4106 (intraperitoneal injection, 5 mg/kg or 20 mg/kg, every 2 days, 14 days) inhibits the proliferation of tumors and no significantly effects on body weight, organ morphology and structure in BALB/c nude mice<sup>[1]</sup>.

Animal Model: BALB/c nude mice<sup>[1]</sup>

Dosage: 5 mg/kg , 20 mg/kg

Administration: Intraperitoneal injection, Every 2 days, 14 days

Result: Inhibited tumor growth significantly at a concentration of 20 mg/kg.

[1]. Yucheng Tian, et al. Discovery of Potent Small-Molecule USP8 Inhibitors for the Treatment of Breast Cancer through Regulating ER $\alpha$  Expression. J Med Chem. 2022 Jul 5.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA