

## Product Data Sheet

Product Name: PROTAC RNF4 degrader-1

Cat. No.: GC81024

### Chemical Properties

Cas. No.

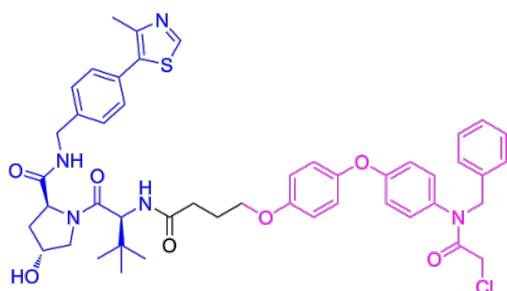
Formula  $C_{47}H_{52}ClN_5O_7S$  M.Wt 866.46

Solubility DMSO: 200 mg/mL (230.82 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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

**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

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PROTAC RNF4 degrader-1 is a RNF4 PROTAC degrader ( $K_d = 64.5$  nM) that degrades RNF4 via the ubiquitin-proteasome system. PROTAC RNF4 degrader-1 induces DNA damage, apoptosis, and exhibits antiproliferative activity in cancer cells. PROTAC RNF4 degrader-1 displays antitumor activity with no obvious side effects in mouse models. PROTAC RNF4 degrader-1 is applicable to the research of hepatocellular carcinoma<sup>[1]</sup>. (Pink: RNF4 ligand; Blue: VHL ligand; Black: linker).

In Vivo, PROTAC RNF4 degrader-1 (Compound RD12) (5-20 mg/kg; i.p.; once every two days; 20 days) induces significant dose-dependent hepatocellular carcinoma tumor growth inhibition in BALB/c nude mice, with 58% and 76% inhibition at 5 mg/kg and 20 mg/kg respectively, without causing observable liver toxicity or body weight loss<sup>[1]</sup>.

In Vitro, PROTAC RNF4 degrader-1 (Compound RD12) (0.2-20  $\mu$ M; 72 h) potently inhibits the proliferation of HepG2 human hepatocellular carcinoma cells with an  $IC_{50}$  of 0.48  $\mu$ M<sup>[1]</sup>. PROTAC RNF4 degrader-1 (0.1-10  $\mu$ M; 6 h) induces dose-dependent degradation of RNF4 protein in HepG2 human hepatocellular carcinoma cells<sup>[1]</sup>. PROTAC RNF4 degrader-1 (0-20  $\mu$ M; 6 h) induces dose-dependent degradation of RNF4 protein in Huh7 human hepatocellular carcinoma cells with a  $DC_{50}$  of 4.16  $\mu$ M<sup>[1]</sup>. PROTAC RNF4 degrader-1 (5  $\mu$ M; 6 h after 2 h pre-incubation with MG132)-mediated RNF4 degradation in HepG2 and Huh7 human hepatocellular carcinoma cells is dependent on the ubiquitin-proteasome system, as pre-treatment with proteasome inhibitor MG132 reverses RNF4 loss<sup>[1]</sup>. PROTAC RNF4 degrader-1 (0.1-10  $\mu$ M; 6 h) induces dose-dependent DNA damage in HepG2 and Huh7 human hepatocellular carcinoma cells, as measured by increased  $\gamma$ H2AX levels<sup>[1]</sup>. PROTAC RNF4 degrader-1 (0-20  $\mu$ M; 6 h) increases levels of RNF4 substrate proteins BRCA1 and MDC1 in a dose-dependent manner in Huh7 human hepatocellular carcinoma cells, consistent with RNF4 degradation<sup>[1]</sup>. PROTAC RNF4 degrader-1 (serial two-fold dilutions; 30 min at room temperature) binds directly to recombinant RNF4 protein with a  $K_d$  of 64.5 nM, as measured by MST<sup>[1]</sup>. PROTAC RNF4 degrader-1 (10  $\mu$ M; 6 h) selectively induces degradation of RNF4 in Huh7 human hepatocellular carcinoma cells, with only 28 of 7483 identified proteins showing significant down-regulation<sup>[1]</sup>. PROTAC RNF4 degrader-1 (5  $\mu$ M; 48 h) induces apoptosis in 52.1% of Huh7 human hepatocellular carcinoma cells<sup>[1]</sup>.

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[1]. Wan H, et al. Development of the first-in-class RNF4 PROTAC degrader as potential therapeutics for hepatocellular carcinoma. Eur J Med Chem. 2026;307:118668.

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