

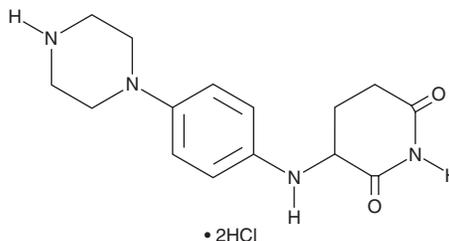
# PRODUCT INFORMATION



## PAG 4'-piperazine (hydrochloride)

Item No. 41881

**CAS Registry No.:** 2922286-32-4  
**Formal Name:** 3-[[4-(1-piperazinyl)phenyl] amino]-2,6-piperidinedione, dihydrochloride  
**MF:** C<sub>15</sub>H<sub>20</sub>N<sub>4</sub>O<sub>2</sub> • 2HCl  
**FW:** 361.3  
**Purity:** ≥95%  
**Supplied as:** A 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

PAG 4'-piperazine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the PAG 4'-piperazine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. PAG 4'-piperazine (hydrochloride) is slightly soluble (0.1-1 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of PAG 4'-piperazine (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. PAG 4'-piperazine (hydrochloride) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

### Description

PAG 4'-piperazine is a building block in the synthesis of proteolysis-targeting chimeras (PROTACs) that target cereblon.<sup>1,2</sup> It has been used in the synthesis of PROTACs that drive RET or bromodomain-containing protein 4 (BRD4) degradation.

### References

1. Qiao, J.X., Williams, D., Gill, P., *et al.* Discovery and synthesis of heterobifunctional degraders of rearranged during transfection (RET) kinase. *J. Med. Chem.* **67**(21), 19736-19754 (2024).
2. Actis, M., Cresser-Brown, J., Caine, E.A., *et al.* Evaluation of cereblon-directing warheads for the development of orally bioavailable PROTACs. *J. Med. Chem.* **68**(3), 3591-3611 (2025).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/22/2025

#### 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