

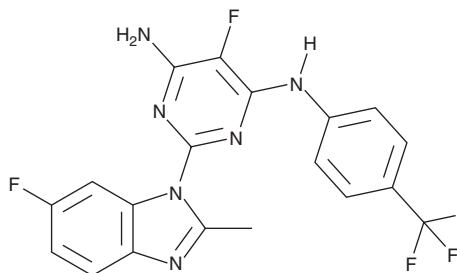
# PRODUCT INFORMATION



## PTC-596

Item No. 33529

**CAS Registry No.:** 1610964-64-1  
**Formal Name:** 5-fluoro-2-(6-fluoro-2-methyl-1H-benzimidazol-1-yl)-N<sup>4</sup>-[4-(trifluoromethyl)phenyl]-4,6-pyrimidinediamine  
**Synonym:** Unesbulin  
**MF:** C<sub>19</sub>H<sub>13</sub>F<sub>5</sub>N<sub>6</sub>  
**FW:** 420.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 222, 262, 300 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

PTC-596 is supplied as a crystalline solid. A stock solution may be made by dissolving the PTC-596 in the solvent of choice, which should be purged with an inert gas. PTC-596 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PTC-596 in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

### Description

PTC-596 is an inhibitor of B cell-specific Moloney murine leukemia virus integration site 1 (BMI1), which is a member of the polycomb repressive complex 1 (PRC1) that has a role in gene silencing.<sup>1,2</sup> It inhibits proliferation of MOLM-13 acute myeloid leukemia (AML) and Rec-1 mantle cell lymphoma (MCL) cancer cells (IC<sub>50</sub>s = 22.4 and 136 nM, respectively). It also induces BMI1 degradation in, and apoptosis of, the same cells. PTC-596 reduces microtubule polymerization and induces cell cycle arrest at the G<sub>2</sub>/M phase in MM.1S multiple myeloma cells.<sup>3</sup> It decreases the number of side population cells, a unique cell population with stem-like characteristics, in Rec-1 cells (IC<sub>50</sub> = 138 nM).<sup>1</sup> PTC-596 (5 mg/kg, p.o.) increases survival in a MOLM-13 mouse xenograft model.<sup>2</sup>

### References

1. Maeda, A., Nishida, Y., Weetall, M., *et al.* Targeting of BMI-1 expression by the novel small molecule PTC596 in mantle cell lymphoma. *Oncotarget*. **9(47)**, 28547-28560 (2018).
2. Nishida, Y., Maeda, A., Kim, M.J., *et al.* The novel BMI-1 inhibitor PTC596 downregulates MCL-1 and induces p53-independent mitochondrial apoptosis in acute myeloid leukemia progenitor cells. *Blood Cancer J*. **7(2)**, e527 (2017).
3. Nagai, Y., Mimura, N., Rizq, O., *et al.* The combination of the tubulin binding small molecule PTC596 and proteasome inhibitors suppresses the growth of myeloma cells. *Sci. Rep.* **11(1)**, 2074 (2021).

#### 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, 12/13/2022

#### 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