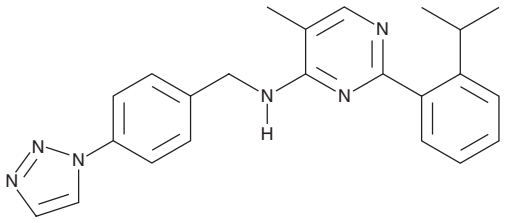
PRODUCT INFORMATION

ML-323

Item No. 18010

CAS Registry No.:	1572414-83-5
Formal Name:	5-methyl-2-[2-(1-methylethyl) phenyl]-N-[[4-(1H-1,2,3-triazol-1-yl)phenyl]methyl]-4-pyrimidinamine
MF:	$C_{23}H_{24}N_6$
FW:	384.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 249 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

ML-323 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-323 in the solvent of choice, which should be purged with an inert gas. ML-323 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ML-323 in ethanol and DMF is approximately 20 mg/ml and approximately 15 mg/ml in DMSO.

ML-323 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ML-323 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. ML-323 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The USP1 deubiquitinating enzyme, which regulates the DNA translesion synthesis (TLS) and Fanconi anemia (FA) DNA damage response pathways by deubiquitinating the central players of these pathways, is activated by the WD40-repeat containing UAF1 protein through formation of a stable USP1-UAF1 protein complex.[1] ML-323 is an inhibitor of the USP1-UAF1 deubiquitinase complex with an IC_{50} value of 76 nM.[2] It demonstrates excellent selectivity against other human deubiquitinases, deSUMOylase, deneddylase, and unrelated proteases.[2] ML-323 has been shown to inhibit the deubiquitination of proliferating cell nuclear antigen and FA complementation group D2 by inhibiting USP1-UAF1 activity in H596 cells.[2] ML-323 potentiates cisplatin (Item No. 13119) cytotoxicity in NSCLC H596 cells and U2OS osteosarcoma cells by targeting the TLS and FA DNA damage response pathways.[2]

References

1. Kennedy, R.D. and D'Andrea, A.D. The Fanconi Anemia/BRCA pathway: New faces in the crowd. *Genes Dev.* **19(24)**, 2925-2940 (2005).
2. Liang, Q., Dexheimer, T.S., Zhang, P., *et al.* A selective USP1-UAF1 inhibitor links deubiquitination to DNA damage responses. *Nat. Chem. Biol.* **10(4)**, 298-304 (2014).

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