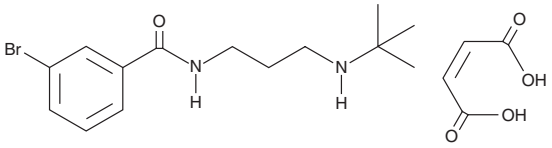
PRODUCT INFORMATION

UNC2170 (maleate)

Item No. 17374

CAS Registry No.:	2173992-60-2
Formal Name:	3-bromo-N-[3-[(1,1-dimethylethyl)amino] propyl]-benzamide, 2Z-butenedioate
MF:	$C_{14}H_{21}BrN_2O \bullet C_4H_4O_4$
FW:	429.3
Purity:	≥95%
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

UNC2170 (maleate) is supplied as a crystalline solid. A stock solution may be made by dissolving the UNC2170 (maleate) in the solvent of choice, which should be purged with an inert gas. UNC2170 (maleate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of UNC2170 (maleate) in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

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 UNC2170 (maleate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of UNC2170 (maleate) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

p53-Binding protein 1 (53BP1) binds to dimethylated lysine 20 on histone 4 (H4K20me2) *via* tandem tudor domains on a 53BP1 homodimer.[1] This interaction is an important part of the DNA damage response.[1] UNC2170 is a micromolar ligand of 53BP1 that binds to a pocket formed by the tandem tudor domains.[2] It displays at least 17-fold selectivity for 53BP1 over other methyl-lysine binding proteins.[2] UNC2170 functions as a 53BP1 antagonist in cellular lysates and shows cellular activity by suppressing class switch recombination, a process which requires a functional 53BP1 tudor domain.[2]

References

1. Botuyan, M.V., Lee, J., Ward, I.M., *et al.* Structural basis for the methylation state-specific recognition for histone H4-K20 by 53BP1 and Crb2 in DNA repair. *Cell* **127(7)**, 1361-1373 (2006).
2. Perfetti, M.T., Baughman, B.M., Dickson, B.M., *et al.* Identification of a fragment-like small molecule ligand for the methyl-lysine binding protein, 53BP1. *ACS Chem. Biol.* **10(4)**, 1072-1081 (2015).

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