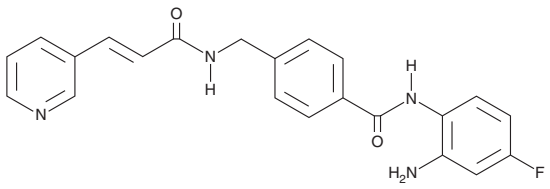
PRODUCT INFORMATION

Chidamide

Item No. 13686

CAS Registry No.:	1616493-44-7
Formal Name:	N-(2-amino-4-fluorophenyl)-4-[[[(2E)-1-oxo-3-(3-pyridinyl)-2-propen-1-yl]amino]methyl]-benzamide
Synonyms:	CS 055, HBI 8000, Tucidinostat
MF:	$C_{22}H_{19}FN_4O_2$
FW:	390.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 203, 238, 258 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

Chidamide is supplied as a crystalline solid. A stock solution may be made by dissolving the chidamide in the solvent of choice, which should be purged with an inert gas. Chidamide is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of Chidamide in these solvents is approximately 20 mg/ml.

Chidamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, chidamide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Chidamide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Chidamide is an inhibitor of histone deacetylases (HDACs; IC_{50}s = 0.095, 0.160, 0.067, 0.733, 0.078, and 0.432 µM for HDAC1-3, 8, 10, and 11, respectively).[1] It is selective for these HDACs over HDAC4-7 and 9 (IC_{50}s = >30 µM for all). Chidamide also inhibits nicotinamide phosphoribosyltransferase (Nampt; IC_{50} = 2.1 µM).[2] It inhibits cell growth in a panel of 18 cancer cell lines (GI_{50}s = 0.4-40 µM) but has no effect on the growth of non-cancerous CCC-HEK human fetal kidney or CCC-HEL human liver cells (GI_{50}s = >100 µM).[1] *In vivo*, tucidinostat (12.5, 25, and 50 mg/kg) reduces tumor growth in HCT-8, A549, BEL-7402, and MCF-7 mouse xenograft models.[1]

References

1. Ning, Z.-Q., Li, Z.-B., Newman, M.J., *et al.* Chidamide (CS055/HBI-8000): A new histone deacetylase inhibitor of the benzamide class with antitumor activity and the ability to enhance immune cell-mediated tumor cell cytotoxicity. *Cancer Chemother. Pharmacol.* **69(4)**, 901-909 (2012).
2. Wu, Y., Wang, L., Huang, Y., *et al.* Nicotinamide phosphoribosyltransferase (NAMPT) is a new target of antitumor agent chidamide. *ACS Med. Chem. Lett.* **11(1)**, 40-44 (2020).

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.

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