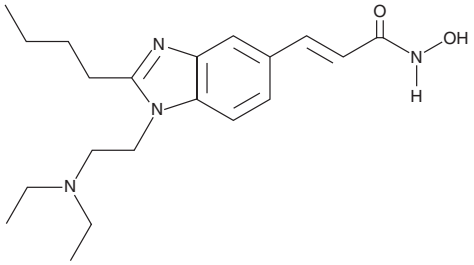
PRODUCT INFORMATION

SB939

Item No. 10443

CAS Registry No.: 929016-96-6
Formal Name: 3-[2-butyl-1-[2-(diethylamino) ethyl]-1H-benzimidazol-5-yl]-N-hydroxy-2E-propenamide
Synonym: Pracinostat
MF: $C_{20}H_{30}N_4O_2$
FW: 358.5
Purity: ≥98%
UV/Vis.: λ_{max}: 249, 303 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SB939 is supplied as a crystalline solid. A stock solution may be made by dissolving the SB939 in the solvent of choice, which should be purged with an inert gas. SB939 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SB939 in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

SB939 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SB939 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. SB939 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SB939 is a pan-inhibitor of histone deacetylases (HDACs; K_is = 16-247 nM for HDAC1-11).[1] It inhibits proliferation of A2780, COLO 205, HCT116, and PC3 cancer cells (IC_{50}s = 0.48, 0.56, 0.48, and 0.34 µM, respectively). SB939 (50 and 100 mg/kg) reduces tumor growth and increases survival in an HCT116 mouse xenograft model. It synergizes with pacritinib (Item No. 16709) to decrease the number of metastases in a MOLM-13 mouse xenograft model when administered at a dose of 75 mg/kg.[2]

References

1. Wang, H., Yu, N., Chen, D., *et al.* Discovery of (2E)-3-{2-butyl-1-[2-diethylamino)ethyl]-1H-benzamidazol-5-yl}-N-hydroxyacrylamide (SB939), an orally active histone deacetylase inhibitor with a superior preclinical profile. *J. Med. Chem.* **54(13)**, 4694-4720 (2011).
2. Novotny-Diermayr, V., Hart, S., Goh, K.C., *et al.* The oral HDAC inhibitor pracinostat (SB939) is efficacious and synergistic with the JAK2 inhibitor pacritinib (SB1518) in preclinical models of AML. *Blood Cancer J.* **2(5)**, 1-10 (2012).

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