Small Molecules

CAY10603

Epigenetic modifier; Inhibits histone deacetylase (HDAC) 6

Catalog # 73582

1 mg

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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
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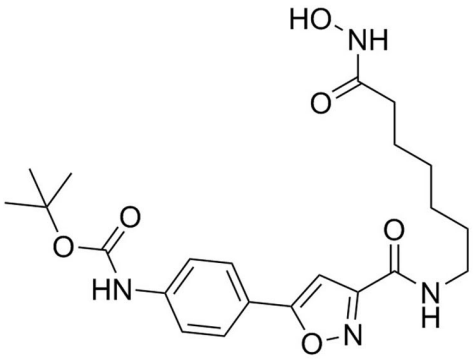
Product Description

CAY10603 is a selective and potent inhibitor of histone deacetylase 6 (HDAC6; IC_{50} = 0.002 nM; Kozikowski et al.). HDAC6 deacetylates lysine residues on the N-terminal part of histones. HDAC6 is also known to regulate heat shock protein 90 (hsp90) via hyperacetylation (Rao et al.).

Molecular Name:	CAY10603
Alternative Names:	HDAC6 inhibitor
CAS Number:	1045792-66-2
Chemical Formula:	$C_{22}H_{30}N_4O_6$
Molecular Weight:	446.5 g/mol
Purity:	≥ 95%
Chemical Name:	N-[4-[3-[[[7-(hydroxyamino)-7-oxoheptyl]amino]carbonyl]-5-isoxazolyl]phenyl]-1,1-dimethylethylester, carbamic acid
Structure:	

Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. For product expiry date, please contact techsupport@stemcell.com.
Solubility:	· DMSO ≤ 30 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 224 µL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

CANCER RESEARCH
· Inhibits growth of several pancreatic cancer cell lines (IC_{50} = 0.1 - 1 µM) and SCCOHT, an ovarian cancer cell line (Kozikowski et al.; Wang et al.).

References

Kozikowski AP et al. (2008) Use of the nitrile oxide cycloaddition (NOC) reaction for molecular probe generation: a new class of enzyme selective histone deacetylase inhibitors (HDACIs) showing picomolar activity at HDAC6. J Med Chem 51(15): 4370–3.
Rao R et al. (2008) HDAC6 inhibition enhances 17-AAG--mediated abrogation of hsp90 chaperone function in human leukemia cells. Blood 112(5): 1886–93.
Wang Y et al. (2015) Abstract 5381: Therapeutic potential of HDAC inhibitors in small cell carcinoma of the ovary, hypercalcemic type (SCCOHT). Cancer Res 75(15 Supplement): 5381–5381.

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