Revision 1

Store at -20C

#31699

Salermide

5 mg

Cell Signaling TECHNOLOGY®

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Background

The reverse amide Salermide is a strong inhibitor of the sirtuin proteins SirT1 and SirT2. Sirtuins are nicotinamide adenine dinucleotide-dependent protein deacetylases involved in cell aging and lifespan regulation. Nuclear SirT1 is implicated in regulating apoptosis, cellular senescence, aging, and longevity; SirT2 is involved in cytoskeletal regulation and progression through mitosis. Exposure of human cancer cell lines to Salermide results in the reactivation of proapoptotic genes repressed by SirT1 and tumor-specific cell death (1). Salermide treatment of human breast cancer cells leads to decreased SirT1 expression and increased acetylation and activation of p53 (2). Inhibition of both SirT1 and SirT2 by Salermide is required to induce p53 acetylation and cell death (3). Salermide treatment of human pancreatic cancer cells potentiates the anticancer effects of a cytotoxin, reducing pancreatic cancer cell progression and stopping the cell cycle at G1 (4).

Molecular Formula

$C_{26}H_{22}N_2O_2$

Molecular Weight

394.5 g/mol

Purity

>98%

CAS

1105698-15-4

Solubility

Soluble in DMSO at 40 mg/mL, ethanol at 10 mg/mL, or DMF at 30 mg/mL.

Storage

Store lyophilized at -20ºC, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20ºC and use within 1 month to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles*.

Directions for Use

Salermide is supplied as a lyophilized powder. For a 15 mM stock, reconstitute 5 mg of powder in 0.84 mL of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References

1. Lara, E. et al. (2009) *Oncogene* 28, 781-91.
2. Dastjerdi, M.N. et al. (2013) *Res Pharm Sci* 8, 79-89.
3. Peck, B. et al. (2010) *Mol Cancer Ther* 9, 844-55.
4. Yar Saglam, A.S. et al. (2016) *EXCLI J* 15, 246-55.

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