

PRODUCT INFORMATION

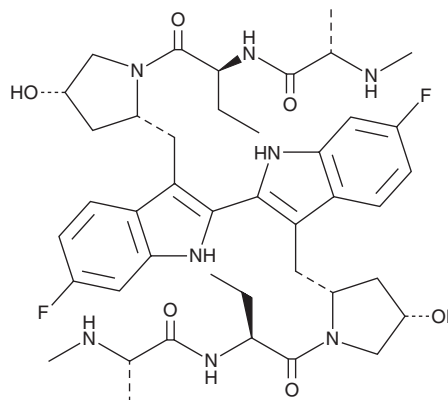


Birinapant

Item No. 19699

CAS Registry No.: 1260251-31-7
Formal Name: (2S,2'S)-N,N'-[(6,6'-difluoro[2,2'-bi-1H-indole]-3,3'-diyl)bis[methylene[(2R,4S)-4-hydroxy-2,1-pyrrolidinediyl]][(1S)-1-ethyl-2-oxo-2,1-ethanediy]]]bis[2-(methylamino)]-propanamide

Synonym: TL-32711
MF: C₄₂H₅₆F₂N₈O₆
FW: 806.9
Purity: ≥95%
UV/Vis.: λ_{max}: 232, 285, 298, 331, 346, 365 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

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

Birinapant is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, birinapant should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Birinapant has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Birinapant is a bivalent mimetic of the Diablo homolog known as second mitochondria-derived activator of caspase (Smac). It is an antagonist of cellular inhibitor of apoptosis 1 (cIAP1, or BIRC2), cIAP2 (BIRC3), and XIAP (BIRC4), binding each at nanomolar concentrations.¹ Birinapant causes rapid cIAP1 degradation, caspase activation, PARP cleavage, and NF-κB activation in breast cancer cells.¹ It shows *in vivo* antitumor activity, inducing apoptosis in several types of cancer xenografts in mice.^{2,3}

References

1. Allensworth, J.L., Sauer, S.J., Lyerly, H.K., *et al.* Smac mimetic Birinapant induces apoptosis and enhances TRAIL potency in inflammatory breast cancer cells in an IAP-dependent and TNF-α-independent mechanism. *Breast Cancer Res. Treat.* **137(2)**, 359-371 (2013).
2. Krepler, C., Chunduru, S.K., Halloran, M.B., *et al.* The novel SMAC mimetic birinapant exhibits potent activity against human melanoma cells. *Clin. Cancer Res.* **19(7)**, 1784-1794 (2013).
3. Nguyen, Q.D., Lavdas, I., Gubbins, J., *et al.* Temporal and spatial evolution of therapy-induced tumor apoptosis detected by caspase-3-selective molecular imaging. *Clin. Cancer Res.* **19(14)**, 3914-3924 (2013).

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.

WARRANTY AND LIMITATION OF REMEDY

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM