

Product Datasheet

Birinapant

Catalog No. **BP-02120** · CAS **1260251-31-7** · Form **free base** · Physical state **other** · Color **Off-white to light yellow** · Version **1.0** · Revision **2026-09-02**

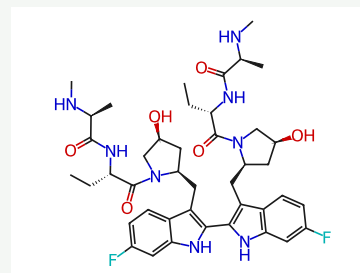
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Target IAP; Apoptosis; HIV	Research area Cancer
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Molecular formula **C₄₂H₅₆F₂N₈O₆**

Molecular weight **806.9408**

STRUCTURE



DESCRIPTION

Birinapant (TL32711) is a SMAC mimetic antagonist, mostly to cIAP1 with K_d of <1 nM in a cell-free assay, less potent to XIAP. Birinapant helps to induce apoptosis in latent HIV-1-infected cells.

BIOLOGICAL ACTIVITY

n Vitro

Birinapant (TL32711) (30-10000 nM; 24 hours) significantly decreases the viability of SUM190 cells in a dose-dependent manner.

Birinapant (TL32711) (30-1000 nM; 4 hours) shows a significant decrease in cIAP1 levels and enhanced PARP cleavage, and induces apoptosis.

Birinapant (TL32711) binds with high affinity to the isolated BIR3 domains of cIAP1, cIAP2, and XIAP and the single BIR domain of ML-IAP and rapidly degrades TRAF2-bound cIAP1 and cIAP2 thereby inhibiting TNF-mediated NF-κB activation.

In Vivo

Birinapant (TL32711) (30 mg/kg; i.p.; every third day (*5)) shows antitumor efficacy and are devoid of overt toxicity in preclinical models.

SOLUBILITY

Soluble in DMSO

REFERENCES

- [1]. Allensworth JL, 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.* 2013 Jan;137(2):359-71.
- [2]. Krepler C, et al. The novel SMAC mimetic birinapant exhibits potent activity against human melanoma cells. *Clin Cancer Res.* 2013 Apr 1;19(7):1784-94.
- [3]. Nguyen QD, et al. Temporal and spatial evolution of therapy-induced tumor apoptosis detected by caspase-3-selective molecular imaging. *Clin Cancer Res.* 2013 Jul 15;19(14):3914-24.
- [4]. Benetatos CA, et al. Birinapant (TL32711), a bivalent SMAC mimetic, targets TRAF2-associated cIAPs, abrogates TNF-induced NF- κ B activation, and is active in patient-derived xenograft models. *Mol Cancer Ther.* 2014 Apr;13(4):867-79.

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