

Product Datasheet

Ispinesib

Catalog No. **BP-02344** · CAS **336113-53-2** · Form **free base** · Physical state **solid** · Color **white to light yellow** · Version **1.0** · Revision **2026-09-10**

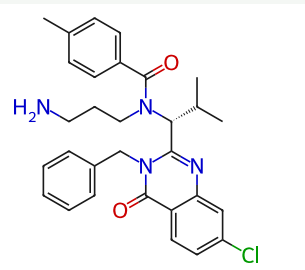
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Target Kinesin; Apoptosis; Autophagy	Research area Inflammation/Immunology; Cancer
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Molecular formula **C₃₀H₃₃ClN₄O₂**

Molecular weight **517.0620**

STRUCTURE



DESCRIPTION

Ispinesib is a specific inhibitor of kinesin spindle protein (KSP), with a K_i app of 1.7 nM.

BIOLOGICAL ACTIVITY

Ispinesib (SB-715992), a potent and selective small molecule inhibitor of KSP, functions by inhibiting KSP ATPase and is 40000 times more selective for KSP compared to other kinesins. In preclinical studies, ispinesib inhibited growth in a wide range of human and murine cell lines with IC₅₀ values of 1.2-9.5nm. Treatment of SKOV3 ovarian tumour cells in vitro with 20nm of ispinesib, or a Colo 205 colon cancer murine xenograft model with 30mgkg⁻¹ of intraperitoneal ispinesib, caused mitotic arrest with cells demonstrating unseparated centrosomes and monopolar mitotic spindles. Tumour growth delay was observed in xenograft models of colon (HT29, Colo201, Colo205), non-small cell lung (Calu-3) and pancreatic (Panc-01) cancers.

SOLUBILITY

Soluble in DMSO

REFERENCES

- [1]. Lad L, et al. Mechanism of inhibition of human KSP by ispinesib. Biochemistry. 2008 Mar 18;47(11):3576-85.
- [2]. Purcell JW, et al. Activity of the kinesin spindle protein inhibitor ispinesib (SB-715992) in models of breast cancer. Clin Cancer Res. 2010 Jan 15;16(2):566-76.
- [3]. Davis DA, et al. Increased therapeutic potential of an experimental anti-mitotic inhibitor SB715992 by genistein in PC-3 human prostate cancer cell line. BMC Cancer. 2006 Jan 24;6:22.