

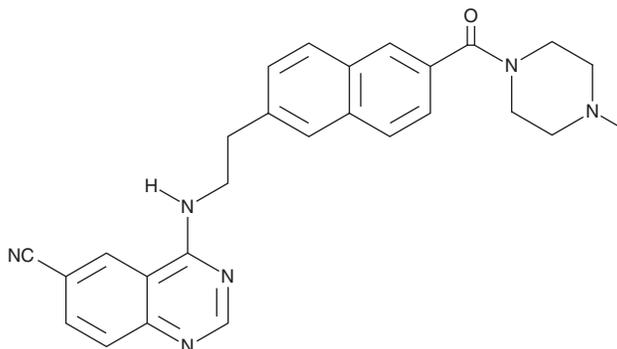
# PRODUCT INFORMATION



## Senexin B

Item No. 28459

**CAS Registry No.:** 1449228-40-3  
**Formal Name:** 4-[[2-[6-[(4-methyl-1-piperazinyl) carbonyl]-2-naphthalenyl]ethyl] amino]-6-quinazolinecarbonitrile  
**Synonym:** SNX2-1-165  
**MF:** C<sub>27</sub>H<sub>26</sub>N<sub>6</sub>O  
**FW:** 450.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 218, 229, 327 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.

### Description

Senexin B is an inhibitor of Cdk8 and Cdk19.<sup>1</sup> It inhibits Cdk8 with IC<sub>50</sub> values ranging from 24 to 50 nM, depending on the assay used. It selectively inhibits Cdk19 and Cdk8 by 98.6 and 97.8%, respectively, in a panel of greater than 450 kinases at 2 μM but does not inhibit MAP4K2 and YSK4 by 69 and 59%, respectively. Senexin B (1.25-5 μM) inhibits cell growth in MCF-7, BT474, and T47D-ER/Luc breast cancer cells in estrogen-containing media in a concentration-dependent manner.<sup>2</sup> It reduces tumor growth in an MCF-7 mouse xenograft model when administered at a dose of 100 mg/kg twice per day. Senexin B (1 and 1.5 μM) also inhibits RANKL-induced differentiation of murine bone marrow-derived macrophages (BMDMs) into osteoclasts.<sup>3</sup> It increases the bone volume fraction and bone mineral density in injured tibiae in a rat model of cancellous bone injury and regeneration when administered locally at a dose of 1 μg.

### References

1. Roninson, I.B., Porter, D.C., and Wentland, M.P. Cdk8-cdk19 selective inhibitors and their use in anti-metastatic and chemopreventative methods for cancer. *Senex Biotechnology Inc. US9321737B2* (2016).
2. McDermott, M.S., Chumanevich, A.A., Lim, C.-U., *et al.* Inhibition of CDK8 mediator kinase suppresses estrogen dependent transcription and the growth of estrogen receptor positive breast cancer. *Oncotarget* **8(8)**, 12558-12575 (2017).
3. Amirhosseini, M., Bernhardsson, M., Lång, P., *et al.* Cyclin-dependent kinase 8/19 inhibition suppresses osteoclastogenesis by downregulating RANK and promotes osteoblast mineralization and cancellous bone healing. *J. Cell. Physiol.* **234(9)**, 16503-16516 (2019).

#### 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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